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# PAPER TRADE JOURNAL

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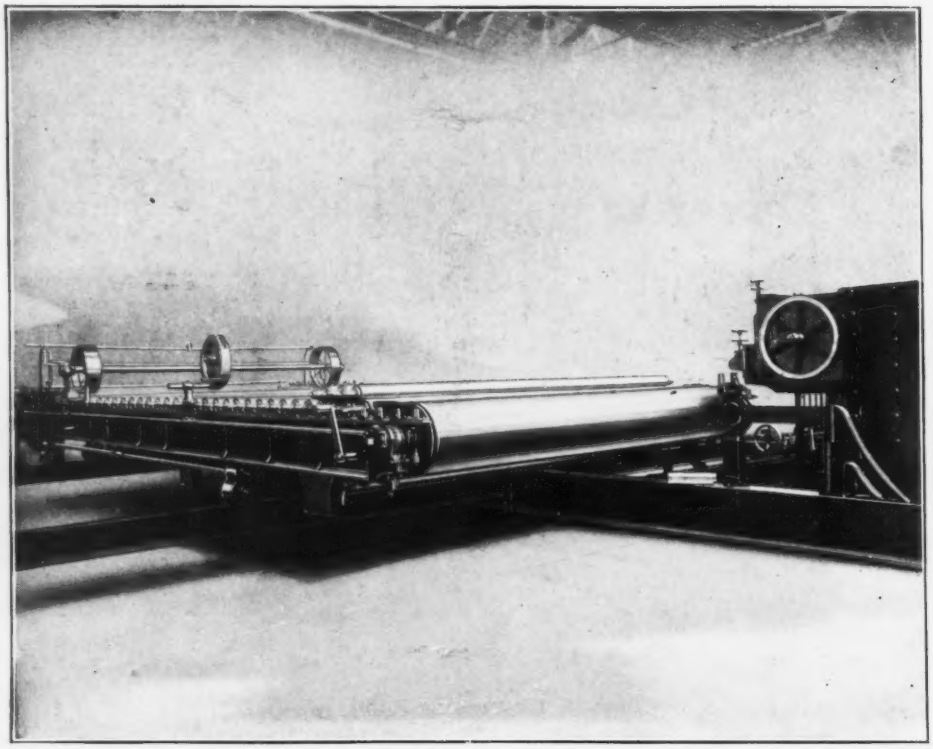

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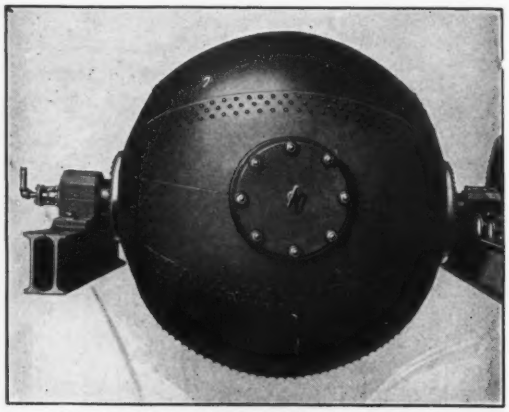

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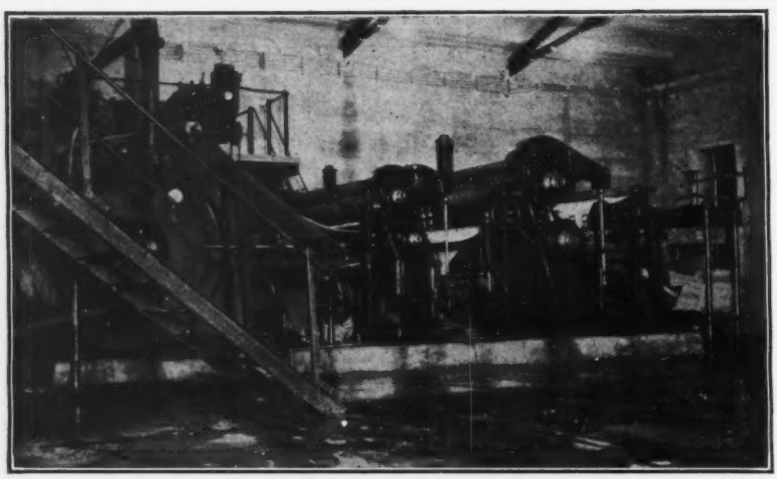

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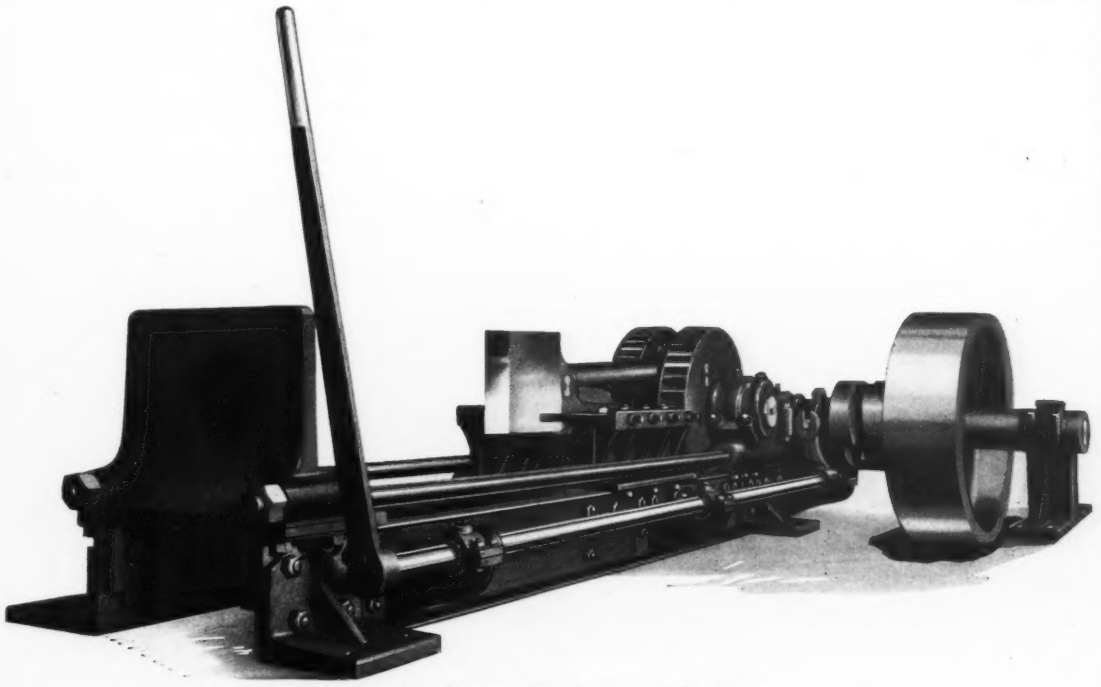

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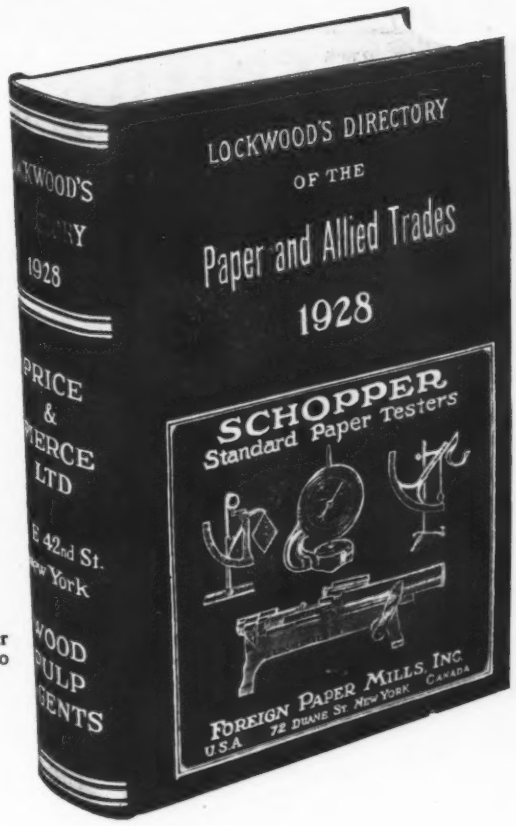


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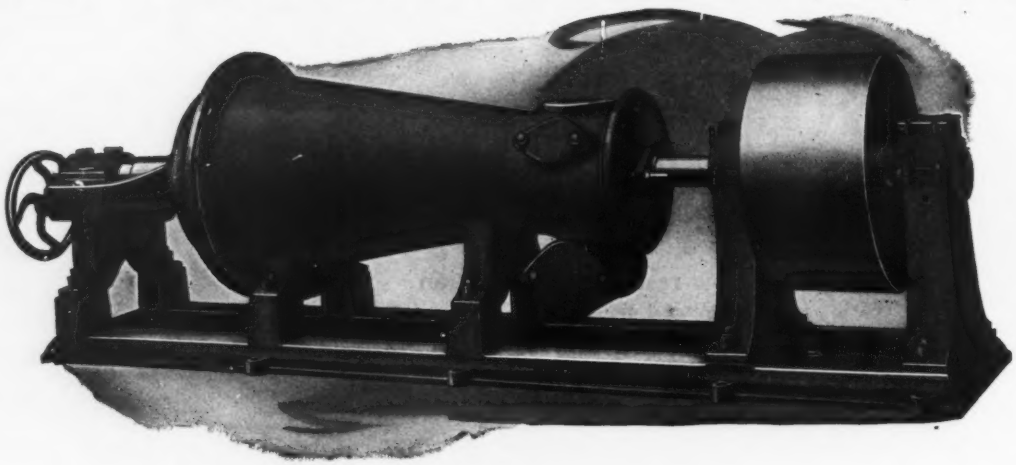

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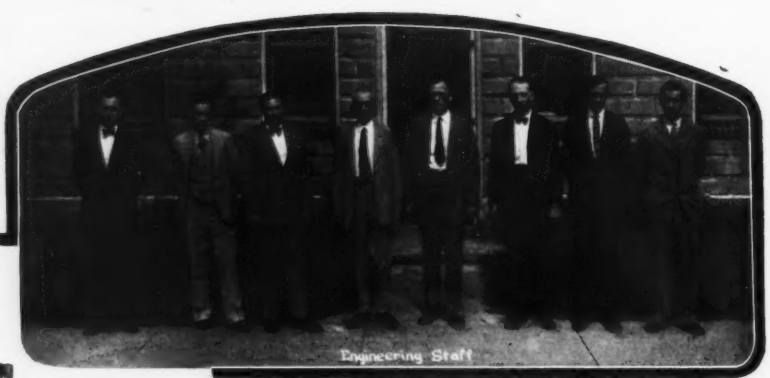


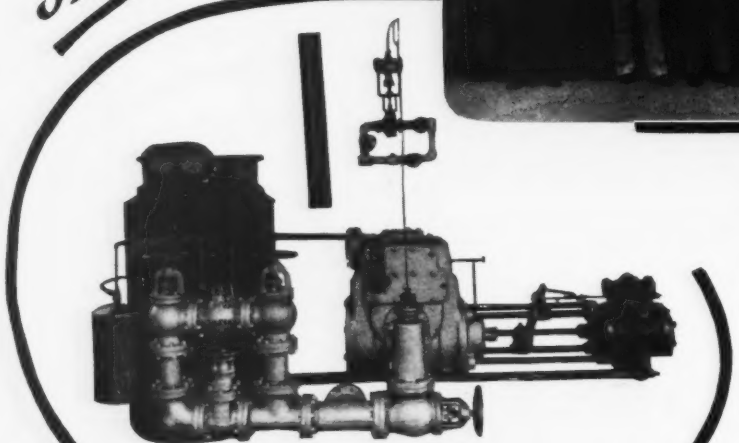

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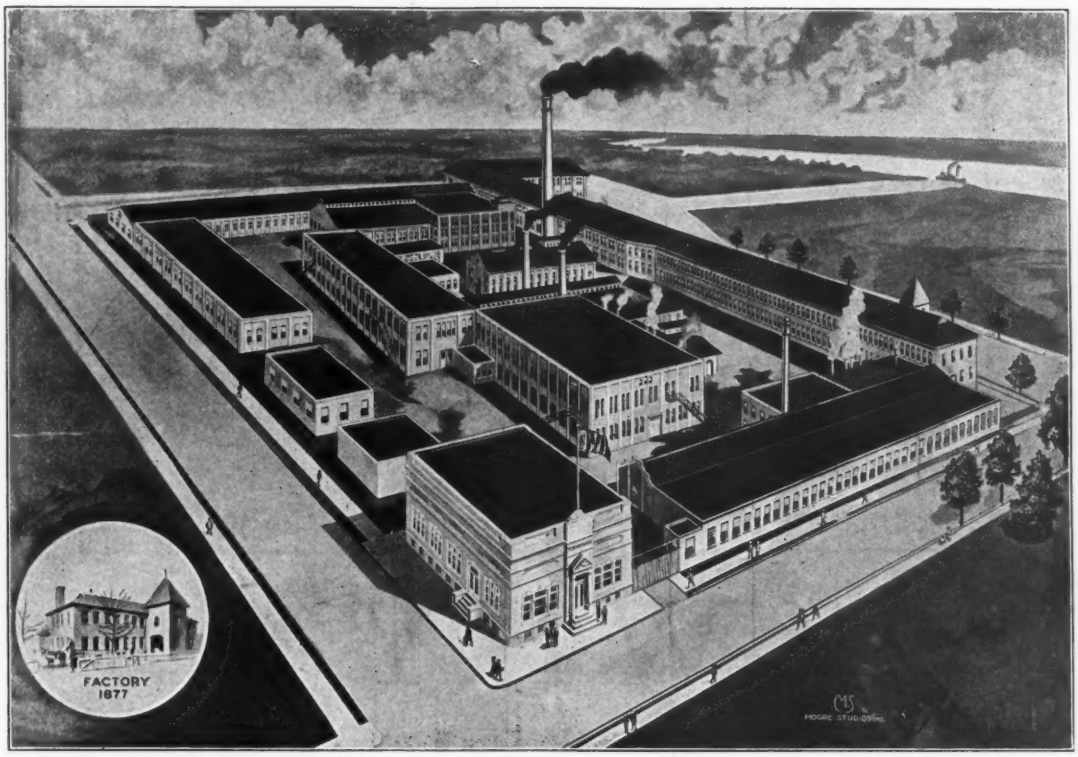


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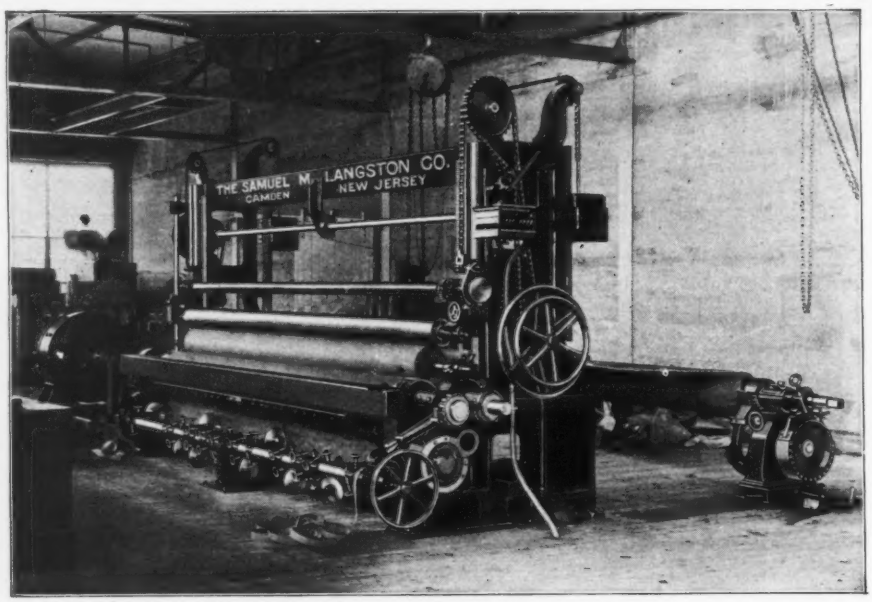


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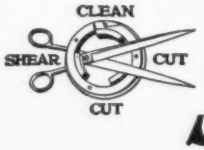


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ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SIXTH YEAR

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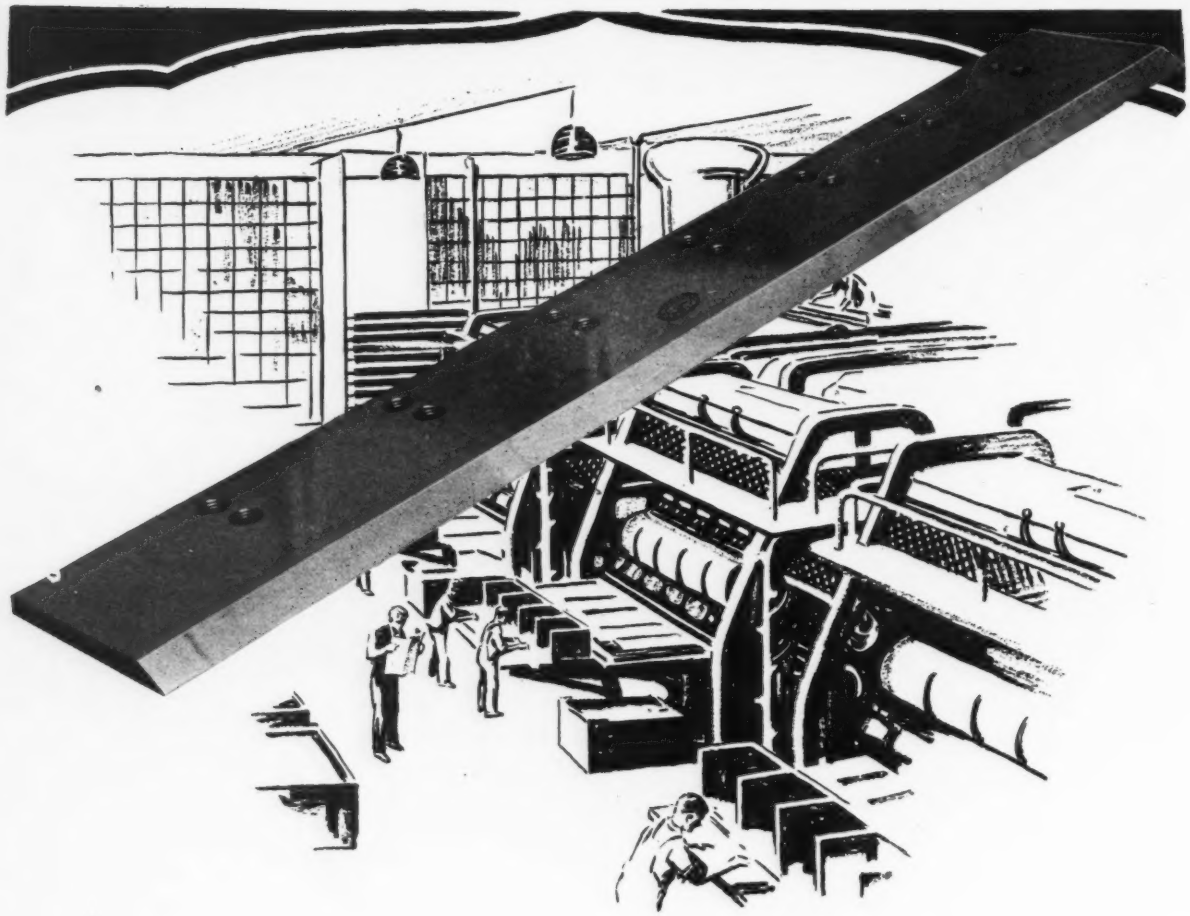

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PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXXV, No. 26 — PAPER — Thursday, December 29, 1927

# Disposal Of Large Eddy Interests Foreshadowed

## R. B. Bennett Sells Majority Holdings in Match Business to George W. Paton, of London, England—Laurentide and International Organizations Reported to be Negotiating for Modern Sulphite Pulp and News Print Plant of Company—Lake St. John Power & Paper Co. Plant at Dolbeau, Que., Begins Operations

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., December 26, 1927.—The outstanding feature of interest in the industry here this week has had to do with the sale of the E. B. Eddy Company. Majority holdings of the Eddy stock are held by R. B. Bennett, who, on being elected recently as Chief of the Conservative party for the Dominion, announced that he would dispose of all his business interests and devote himself in future to politics. During the week Mr. Bennett surprised everybody here by returning from a three weeks' trip to England, when nobody knew that he had been out of the country. Immediately on his arrival it was announced that the match business of the E. B. Eddy Company would be taken over by a new company under the presidency of George W. Paton, of London, England, chairman and managing director of Bryant and May, the famous British match manufacturers. The announcement was made by George H. Miller, president of the E. B. Eddy Company, as follows:

"Eddy Match Company, Ltd., has recently been incorporated and organized under the company's act, the charter having been granted last week from the office of the Secretary of State for Canada for the purpose of acquiring the match businesses of the E. B. Eddy Company, Ltd., Hull; the Dominion Match Company, Ltd., Desoronto, Ont.; the Canadian Match Company, Ltd., Pembroke, Ont.; the World Match Corporation, Ltd., Berthierville, Que."

A. G. Woodruff, of the Canadian Match Company, Ltd., will be the general manager of the new company.

Mr. Paton, president of the new company, is also chairman of the British Match Corporation, Ltd., a company having a capital of approximately thirty million dollars, and whose operations extend to various parts of the British Empire. It will be seen, therefore, that the Canadian companies mentioned will form part of one of the large match amalgamations in the world.

Mr. Millen's announcement adds: "The E. B. Eddy Company, Ltd., has not disposed of any of its buildings or real estate, but pending the visit of Mr. Paton to Canada next year, when the definite plans of the new company will be formulated, arrangements have been made with our company by which the new match company will continue to operate on the premises at Hull, at which we have so long carried on our match manufacturing business. The new match company will make no public issue of securities."

Meanwhile a fresh flood of rumor has arisen as to the disposition of the modern sulphite pulp and news print mill of the company. The International Paper Company was first mentioned as a probable purchaser, but now it is reported that the Laurentide Company has taken an option on the mill. The report has sent Laurentide stock soaring on the Montreal Exchange. Some time ago President Chahoon, of the Laurentide Company, denied that the company held an option on the Eddy mills, but nothing was said about any negotiations that may be afoot, and the stock market is now discounting the possible purchase.

### Another Big Mill Inaugurated

Last week the inauguration took place of the big news print mill of the Anglo-Canadian Pulp and Paper Company at Quebec. Within a few days another large mill has been inaugurated, namely that of the Lake St. John Power and Paper Company at Dolbeau, Que., at the west end of Lake St. John. Premier Taschereau started machine No. 1, which has a capacity of 110 tons of news print per day, and before the New Year it is expected that the second machine, with a similar capacity, will be in operation. According to John Stadler, the general manager, the layout has been made for an ultimate production of not less than 660 tons of news print per day, which will require six machines. The expenditure of the company for its present enterprise is upwards of ten million dollars, and the entire capacity output of paper has been sold under contract for a period of ten years.

The company owns timber leases from the Government covering 1,000 miles of pulp wood lands on the Mistassini and Aux-Rats Rivers adjoining the mill. This area contains 6,000,000 cords of pulp wood and all of this wood can float down the river direct to the mill, making the pulp wood supply one of the cheapest possible to obtain. The company now has ample wood in storage at the mill to cover requirements until next summer. There are also over 1,000 men in the woods, as the cut for this winter will be 100,000 cords which will be received at the mill in the drive next spring. The company has also in storage coal, limestone, sulphur, and other supplies required for its operation.

The power supply for the present plant is obtained from Duke-Price Power Company under a long-term contract, for which purpose the power company has built a high class double-circuit transmission line carried on steel towers, and extending to the paper mill direct from the power house, a distance of 36 miles. This forms a very dependable and advantageous power supply for the mill.

# Paper Trade Outlook Bright in Pennsylvania

## Fine Paper Houses Booking Large Contract Orders Covering First Half of Next Year—Southern Kraft Moving in Heavy Volume, Influenced By Current Attractive Quotations — Paper Stock Market Awaiting Revival of Manufacturing Activities

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., December 26, 1927.—Both branches of the industry have been moving along with the holiday market meeting belated purchases for the consumer in small lot shipments that bulk fairly large in the total volume of specialties. As the trade confines its attention to the removal of stock now on hand in anticipation of the coming inventory there are numerous offerings of special lots under the market quotations and even below those of the mills from the local distributors who desire to make room for fresh goods with the advent of the New Year. While the prices that were made attractively low in the mid-December days continue to hold, the mills are receiving gratifying orders for early 1928 delivery in some of the grades of wrapping papers and specialties distributed through the wrapping paper division. There are large contract orders being booked for the fine grade by the prominent printing and publishing concerns under term of six months deliveries.

A few of the leading paper merchants who have been able to clean up their stocks for the current year are taking advantage of the low prices in krafts and are buying in carload lots at this time believing that the present attractive offers will not be continued for long as mills have already received sufficient orders to keep operations at present capacity throughout the month of January This is particularly true of the southern kraft mills and those mills in the northern section involved in the price warfare that has been waged between the southern manufacturers and their northern brethren within recent weeks in order to obtain sufficient business to maintain operation throughout the first month of the new year.

Local paper mills have been only fairly patronized and orders are slow in return for the efforts exerted to secure business. Small lots of paper are being booked by the distributors in fine grades pending a more definite trend of business in the coming year. Manufacturers of building and roofing papers are well booked with advance business in the grades that will be consumed with the return of building activities in the coming year. Dealers apparently are anticipating an early resumption of building operations with the coming year owing to the mild weather that now prevails. The lower prices on deadening felts has stimulated an interest in these grades and mills are being patronized in freer orders for the coming year.

### Many Specialties Lower

There were many offers made for specialties in the reduced list in mid-December. Sulphite manilas have been lowered ½ cent per pound. Sulphite bonds are included in the reduced grades. Where large orders are secured for the offerings in tissues, white No. 1 and No. grades, concessions are made but smaller lots are held at the higher prices. Numerous offers and assortments of tissues are now being sent out by mills, eager for booking January orders. Krafts in carload lots from northern mills are $8 less than they are quoted by the southern manufacturers but the price recessions are confined only to the few mills that met the lower prices effected by the mills in the south a few weeks ago. Grey bogus is now 2 cents per pound f.o.b.—a reduction of ¼ cent from the prices of early December. Gummed kraft tape has been in such heavy demand that prices have been firmly held in the seasonal activity. Toilet papers are also holding firm, and demand continues towards the normal distribution of the season.

### Paper Stock Moving Slowly

The paper stock business has slumped into a year end affair with much time on the hands of the dealers for hunting up the raw materials that will be needed when the first of the year brings about a revival in manufacturing plants. There is dearth of the commoner grades as has been experienced all through the Fall and dealers are seeking diligently for new supplies that will be required to restock warehouss for the early 1928 needs of the mills. There are plenty of grades in the higher priced raw materials to fill the requirements of the manufacturers for several weeks but like the commoner grades they are becoming scarcer as present wares dwindle and new sources of stocking are cut off because the pickers have been seeking other employment with the duller times in the industry.

### McDowell Mills to Be Improved

The mills of the McDowell Paper Company, one of the best known and oldest mills in this section of the country, will be placed under renovation shortly with a view to extending and speeding up production in the pulp department. A new Shartle Jordan is being installed under direct electrical connection in conjunction with a General Electric motor. The growth of business necessitates the speedier handling of pulp and the improvements will be perfected ready for operation with the 1928 business cycle. The McDowell Mills, over one hundred years in existence under the original family control, are now brought up-to-date with all modern electrical units providing for modern paper making facilities. The mills produce a line of fancy wrapping papers, glassine and waxed specialties and already have a large advance order list to keep operations at present capacity for the early weeks of 1928. The present head of the mills is Charles McDowell, grandson of the founder and one of the best known of paper manufacturers in this section.

### Paper Men Join in Pre Holiday Festivities

Paper trade associates of the Philadelphia Typothetae joined with the members of the organization in celebrating the Christmas holidays at the annual function held in the Public Ledger Club adjacent to the headquarters of the local body last Tuesday. There was arranged in conjunction with the semi-monthly dinner a special holiday occasion when favors, Christmas gifts and entertainment was part of the program. Those from the paper trade who participated in the celebration were N. A. Considine and Leonard Peck of the Paper House of Pennsylvania; Irwin Megarge, Curtis Bros., Inc.,; Andrew Simon, Charles Beck Paper Compnay; Walter Doescher, Louis DeJonge Company; George Weaver and Edward A. Keller, Garrett-Buchanan Company; John Frantz, A. Hartung, Inc.; David Lindsay, Jr., Lindsay Paper Company; M. K. Christine and R. W. Christy, Raymond and McNutt; Mrs. J. P. Graham, Richie Howarth Company; Howard Satterthwaite, and Clyde B. Cobaugh, Satterthwaite-Cobaugh, Company; Douglas Bond and T. G. Ashworth, D. L. Ward Company; and W. S. Wilcox and E. T. Walters, Wilcox, Walters, Furlong Company.

Members of the Philadelphia Paper Trade Association affiliated with the Poor Richard Club met their allies in the advertising profession at the annual Christmas dinner held in the club rooms on Locust street near Juniper, last Wednesday, when distribution of gifts and an entertainment program was provided in the pre-holiday celebration. Among the paper men who joined at the dinner table in the pre-holiday function were Norbert A. Considine and R. J. Considine, Paper House of Pennsylvania; Howard Satterthwaite and Clyde B. Cobaugh, Satterthwaite-Cobaugh Company; John Frantz, A. Hartung, Inc.; Horace Lindsay, Lindsay Paper Company; W. W. Wilcox, Wilcox Walter Furlong Com-

pany; and Harry Donaghue, Molten Paper Company. Among the winners in the raffle which followed the noon day dinner was N. A. Considine, who captured the lucky number that carried the award of a set of military brushes.

### Riegel & Co., Inc., in Holiday Frolic

This year the members of the executive staff of Riegel & Co., Inc., and the employees joined in the holiday celebration of a stag dinner held last Friday evening at the Rittenhouse Hotel, 22nd and Chestnut streets. While in former years the celebration in the pre-holiday week has been extended to the fair sex, this year only the men sales representatives and the executives participated in the annual frolic and distribution of prizes that were made for the winners in the series of card games that followed the banquet. Arthur B. Sherrill and Winifred Predmore, of the firm, with Sales Manager James McCracken, addressed brief words of welcome and extension of greetings for the Yuletide during the dinner service. The program and entertainment was arranged by R. Leroy McCall, of the sales staff, who yearly has given his services to the get-together Yuletide dinner and who acted as Master of Ceremonies during the evening. In the games of bridge and pinochle which wound up the program, prizes were won by James McCracken and E. D. Shephard.

### Beaver Valley Mills Resume Tissue Production

The former Garret Mills, now known as the Beaver Valley Mills, located on the Brandywine at Granogue, Delaware, have returned to the production of tissues which was discontinued at the time of the change of ownership. The Beaver Valley Mills will produce a line of No. 2 tissues. The mills have within recent times been producing anti-tarnish tissues and kraft tissues. They were bought by Herbert Mason, now connected with the mills of Curtis & Bros., Newark, Del., three years ago from the Garrett interests engaged in the production of No. 2 tissues at the time of the sale.

### Windsor Lock Mills Now on Full Time

While high waters did much damage to the mills in the Connecticut Valley during the recent floods in that section of the country they did not seriously interfere with the operations of the Windsor Lock Mills owned by Philadelphia trade associates. Harvey E. Platt, of the J. L. N. Smythe Company, who is affiliated with the Windsor Lock Mills, located in Connecticut, reports that while the mills were closed down in November they were not in any way damaged by the swollen waters. Resumption of operations has been effected and the mills are now on full time operation The mills were recently modernized and equipped with mechanical units for the production of waxing specialties in the light weight grades. Under the reorganization the Windsor Lock Mills will be devoted entirely to production of these light weight waxing specialties for the trade.

### Diamond State Fibre Company Gets Auto Contracts

Contracts for supplying the Nash Motors, Chrysler and Chevrolet Motors with timing gear materials have been awarded to the Celeron Company, Division of the Diamond State Fibre Company, of Bridgeport, Pa. These contracts cover the first six months of 1928. There have also been received by the Celeron Company Division contracts from the Velie and Marmon Motor Car Companies covering similar requirements for materials for gears throughout the coming year. The Diamond State Company produces besides Celeron, insulating papers, vulcanized fibers, horn fibers, trunk and counter board.

### Gallen Paper Co. To Have Larger Home

With the new year, the Gallen Paper Company will be entirely settled in its new home at 739-743 N. 24th street in the building which the head of the firm, John J. Gallen, recently purchased. The Gallen Company, one of the largest of outlying district paper distribution companies, has been provided with double space for the expansion of its business in the new quarters. The new and modern building occupies two stories and to its warehouse has been removed from the old location at 2421 Aspen street the stock of coarse papers, bags and specialties. The business has been established for more than 16 years and with the enlarged quarters provision is made for extending these lines.

### New Box Papers for Louis DeJonge Co.

New 1928 fancy box papers manufactured by the Louis DeJonge Company of New York will be ready for distribution to the trade in sample form with the new year. The local sales manager, Walter V. Doescher, now located in the Insurance Company of North America Building, 16th and Arch streets, will begin the distribution of the new fancy patterns made up in numerous designs next month.

### Herbert Mason Visits Philadelphia Trade

With the closing of the 1927 business cycle of Curtis & Bros., the Philadelphia distributors of the Curbro and other papers manufactured in the Newark, Del., mills of that company, the local offices were visited during the week by Herbert Mason, who is associated with the manufacturing branch of the business and a member of the firm. Recently the Curtis Brothers Mills were completely electrified and modernized, the innovations being effected under the reorganized company.

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## Wood Grinding Service Gets Verdict

[FROM OUR REGULAR CORRESPONDENT]

UTICA, N. Y., December 27, 1927.—After more than five years of litigation Judge Frank Cooper, of United States District Court, has handed down a decision in favor of the Wood Grinding Service, Inc., and against the International Burr Corporation. Judge Cooper holds that defendant has infringed upon the burr patent; is guilty of contributory infringement upon the "process" patent and is entitled to an injunction and accounting.

The memorandum of decision cites that plaintiff claimed infringement upon two United States patents, one covering a burr used in dressing grindstones to grind pulp and the other a process and apparatus for reducing wood to pulp. Officers and incorporators of the defendant corporation were former employees of plaintiff under the former name of Hall Process Company. The defendant corporation was organized in 1916.

Plaintiff was securing large royalties from a large number of paper mills using the two patents and granted permission for defendant to manufacture products covered by the patents. It is alleged by plaintiff that defendant sold burrs to manufacturers under license and failed to make proper accounting to plaintiff. The plaintiff is a subsidiary of the Sherman Paper Company and the defendant corporation has a plant in Newell street, Watertown. William P. Aikin is president of the latter firm.

It is not known whether an appeal will be taken from the decision but it is expected that there will be more litigation. Attornew Delos M. Cosgrove with Parker, Proschnail and Bean, of Buffalo, as counsel, appeared for plaintiff. Attorney Charles A. Phelps with Spear, Middleton, Donaldson and Hall, of Washington represented the defendant firm.

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## Safety Expert Addresses Union Bag Employees

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., December 27, 1927.—An accident prevention meeting was held for superintendents and foremen of the Union Bag and Paper Corporation in the recreation rooms of the bag factory. The meeting was addressed by Stuart H. Brown, a safety expert from the New York office of the corporation. He stressed efficiency in the work, maintaining that efficient employees mean less accidents. Thomas R. Remsen acted as chairman of the meeting and other speakers included Reuben H. Weingard, superintendent of the bag department, and Fire Chief George D. Nolan. Following the meeting a smoker was enjoyed.

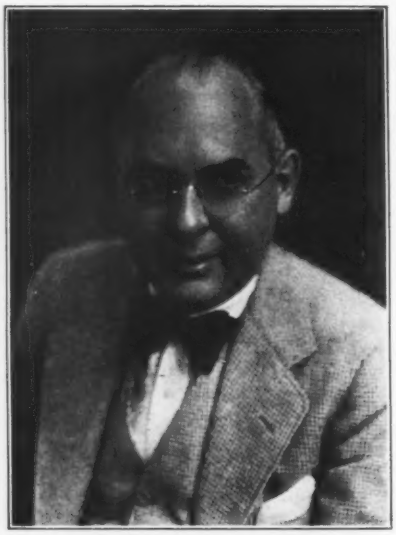
# Chicago Paper Men Optimistic Over Next Year

## Box Board, Tissues, Liner Board, News Print and Wrapping Papers Fare Well Throughout Holiday Season—Second Annual Banquet of Chicago Paper Association Proves Highly Successful—Over 400 Members Attend Event

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., December 27, 1927.—One more week and Chicago paper men will be facing a New Year with the expectations that it will bring increased business, a greater margin of profit, greater consumption and several other things that would make fine Christmas presents. The sentiment expressed at the annual banquet of the Chicago Paper Association, forecasts on the coming year from mill representatives, salesmen and jobbers, seemed to be that 1928 would show an improvement.

Chicago has just passed through what promises to be a record buying season even though actual figures are not yet being shown.



EDGAR A. HALL, JR.

The shopping districts in the loop and the North, West and South sides have been thronged with shoppers and, according to reports, they have been buying. Some of this volume aided paper merchants directly, depending on the lines they are engaged in.

Three Chicago newspapers showed a gain of 8 per cent over last year's advertising lineage figures. Three other papers of the class depending on a general circulation, lost 14 per cent during 1927. Comparing these two sets of percentage figures show that Chicago's daily newspapers lost 6 per cent during the year. The figures were printed in a recent issue of the *Chicago Journal of Commerce,* Chicago financial and business daily.

Box board, tissues, liner board, news print and wrapping papers fared the best throughout the busy Christmas season according to reports.

### Chicago Paper Association Banquet

A big threesome, working tirelessly, and consisting of Leo S. Altholz, toastmaster, James Danehy, chairman of entertainment, and Earl Beier, chairman of dinner arrangements, contrived to make the second annual banquet of the Chicago Paper Association held Monday, December 19, at the Palmer House, one huge success.

Over 400 men members of the association, salesmen, mill representatives and members of the Chicago chapter of the Salesmen's Association of the Paper Industry, were treated to a program that consisted of splendid talks by Quin Ryan, radio announcer for WGN; Edgar A. Hall, Jr., and Jim Coy, president of the Salesmen's Association. Prior to the announcement of the first speaker and interspersed throughout the program were some timely and well chosen remarks made by Mr. Altholz, the toastmaster, and also newly elected president of the Chicago Paper Association.

With Quin Ryan perhaps as the deciding factor in his decision, Mr. Altholz quickly turned the entire evening into a radio program broadcasted over 'W.C.P.A.," the Chicago Paper Association station. The banquet program was in reality broadcasted over the air from WJJD.

The two main factors in the evening's entertainment were the talk by Quin Ryan and the showing of slides on Net Profit Control and a lecture accompanying the slides given by Ed Hall, who very capably filled the shoes of N. A. Schoenbucher who was unable to attend.

### Mr. Altholtz Opens Program

Mr. Altholz, who speaks as if he had been appearing before the public all his life, opened the program with a few brief and timely remarks on the growth of the Chicago Paper Association and the fact that the attendance at the banquet had demonstrated a solidarity of purpose and brought together the entire paper fraternity from "tree to trade" on a common ground. In pointing out the fact that mill representatives, jobbers and salesmen were all there Mr. Altholz remarked that "this is an indication of the way we are growing. It is an important milestone in our development illustrating co-operation and the friendship that we all feel for each other."

Quin Ryan gave a most interesting story concerning the radio, some of the queer circumstances taking place through the ether, the radio's future, and spun the entire yarn with plenty of humor and enough interesting experiences to have kept the entire audience at his disposal for many an hour. Mr. Ryan depicted the strange feeling a speaker has when he appears before the microphone for the first time, declaring that President Coolidge and Rin-Tin-Tin were the only two broadcasters he had ever dealt with who were not absolutely stunned at the task confronting them.

### Edgar A. Hall, Jr., Addresses Gathering

Edgar A. Hall, Jr., first president of the Chicago Paper Association and present chairman of the board of directors then told his audience of the spirit behind the association. He urged the necessity of a standard policy for salesmen, pointing out that if such policies were not adhered to that chaos would reign in the market. "Make your business a decent business and a profitable business," declared Mr. Hall. "There may be times when you feel it doesn't help much to belong to an association, but it does."

Mr. Hall harked back to the time when competition was so fierce that each jobber thought his competitor a thief and a crook, and always was ready to cross the street to avoid meeting him. "It is not for us to fix prices, not to boycott, not to blacklist. It is for us to try to form a policy for the industry that will build up and improve the Chicago market." "The Chicago Paper Association is trying to figure the exact cost of operating a business and it is our purpose to make a 5 per cent net profit on our sales —a modest profit but a fair one. We are out to make the Chicago wrapping paper market a decent one."

Walter Cox, president of the Chicago chapter of the Salesmen's Association of the Paper Industry was next presented by Mr. Altholz. Then Jim Coy took the bandmaster's position at the microphone of W.C.P.A. and thanked the Chicago Paper Associa-

tion for its splendid treament. "We need a closer touch with the jobbing trade. The future is brighter when co-operation is evident between the mill and the jobber."

### Net Profit Control Slides Shown

The showing of the slides on Net Profit Control with Mr. Hall giving the accompanying lecture was the next feature on the program. This educational program prepared by the National Paper Trade Association was preceded by the showing on the screen of the purposes of the Chicago Paper Association in their study of Net Profit Control.

It was a splendid banquet and again pointed out something that is growing more obvious every day. The Chicago Paper Association is progressing rapidly. It is doing a constructive piece of work in its market that every other market could well follow. Its purposes were fully brought out in a Code of Ethics recently printed in the PAPER TRADE JOURNAL.

At the first banquet, held a year ago, a hatchet was buried and a pipe of peace smoked, emblematical of the progress this group of wrapping paper merchants had made in working for a decent market and a fair profit. Monday night there was no need for a peace pipe, as Mr. Altholz pointed out. It looks as though the worst of the war in this market had gone out and that the Chicago Paper Association was doing the old act wherein "a little lamb shall lead them."

### "Bookanwrap" Christmas Number

*Bookanwrap*, the clever and most interesting monthly house organ put out by the Pilcher-Hamilton Company, Chicago, has an attractive silver grained paper cover this month, along with a figure of Santa Claus to give it the proper holiday atmosphere. From the *Bookanwrap* comes the information that a promising material, reported from the tropical jungle, is caroa, a member of the pineapple family. Natives of Brazil, continues the publication, have cut the long, narrow leaves for many, many years. They beat them between stones to separate the fiber and, after wetting and washing, weave the fiber into twine for nets, fishing lines and ropes. Caroa, it has also been found, can be made into paper.

## Sabin Robins Paper Co. Offers Stock

[FROM OUR REGULAR CORRESPONDENT]

CINCINNATI, Ohio, December 27, 1927.—The Sabin Robins Paper Company is offering $500,000 worth of cumulative 7 per cent preferred stock, par value $100 per share.

The company was founded in 1885 in Middletown, Ohio, by Sabin Robbins, who was a pioneer in the paper industry. The company was organized as a distributor for paper manufactured in Middletown. Its business has grown from that beginning to its present international distribution. The distribution is made from its main warehouses at Cincinnati and Cleveland and through branch warehouses and sales organizations in Chicago, St. Louis, Detroit, Pittsburgh and Los Angeles.

The company's business has been rapidly expanding and is under the active management of Sabin Robbins, Jr., and Douglas Robbins, sons of the founder of the company. Henry Junginger, Jr., the treasurer, who is well and favorably known in the paper financial circles, is in charge of all financial matters pertaining to the company.

The proceeds derived from the sale of this stock will be used by the company first to call all of its outstanding bonded indebtedness of approximately $225,000 at 101 and accrued interest, the balance to be used for additional working capital.

For the four year period ending June 30, 1927, the Net Earnings, before Federal Income Taxes, totaled $273,710.11, equal to an average of $68,427.53, or over 13 per cent on this issue of Preferred Stock.

The balance sheet as of June 30, 1927, adjusted to give effect to this financing, shows total tangible assets equivalent to $1,385,592.75, or over $277 per share.

## Philip Carey Co. To Build in Dayton

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, December 27, 1927.—That the Philip Carey Company of Lockland, manufacturers of roofing and building papers, and other grades, are counting upon doubling their business in Dayton is evidenced by the purchase the Dayton branch made this week in acquiring the site located next to its present Weakley street warehouse for the purpose of erecting a large structure as soon as the weather is favorable.

The company established a branch in Dayton several years ago and handled such a large volume of business that it was decided to prepared for future growth.

It is stated by D. C. Cunningham, local manager of the Philip Carey Company, that the tract bought by the concern will be improved early next year, the plan being to erect a large warehouse, costing not less than $30,000. The amount paid for the tract which is continguous to the Baltimore & Ohio Railway and affords excellent transportation and shipping facilities is reported to have been $17,500. The lots were purchased from Benjamin Gradsky, Dayton manufacturer.

Mr. Cunningham announces that the company expects to double its facilities and is confident of increasing its business to an extent that will justify the improvement and the expenditure of approximately $50,000. He expressed the belief that the company will handle more than 750 carloads of material during 1928. This estimate is based on the business of the past in Dayton. It shows to what extent the Lockland concern has contributed to the progress and advancement of Dayton. Few cities in the country have developed more substantially in the development of its residential districts, in the construction of modern apartment houses and mercantile establishments, according to builders and contractors, whose statements are verified by cold facts and figures.

Building papers are more and more in demand and play an infallible and an inevitable part in construction work, from the interior walls up to the very roof that covers the structures.

## I. P. Co. Wins In Coal Rates Case

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., December 27, 1927.—International Paper Company has won another skirmish in its fight for lower freight rates on coal shipments. Rates on anthracite from mines in the Wyoming, Lehigh and Schuylkill regions in Pennsylvania to points in Northern New York including Piercefield, where one of the I. P. mills is located, are unreasonable according to a decision handed down by J. J. Williams, Interstate Commerce Commission examiner. Incidentally the examiner decrees that the Adirondack division of the New York Central is "not a branch line in the proper acceptation of the term."

Defendant railroads had contended that the Adirondack division was a branch line and that therefore points on it should be forced to pay three times the freight costs applicable to a main line. The examiner finds that the division is a through line between the United States and Canada over which the New York Central operates through passenger trains from Buffalo and New York City.

The New York Central and the other railroads argued that low traffic density, grade and the order of the New York State Commission prohibiting the use of coal as fuel during certain periods of the day all make for higher transportation costs. They contended therefore that the mileage between Utica and Piercefield should be double to compensate for the increased costs. By that method they arrived at distances of 443 miles from the Wyoming region, 483 miles from the Lehigh and 498 miles from the Schuylkill region.

These distances were attacked by the International Paper Company, complainant in the case, as circuitous and the examiner upheld that contention.

# Ontario Paper Industry Had Favorable Year

## Situation Today Is Better Than Anticipated and Future Outlook Is Promising—Trend of Paper Business Is Towards Centralization, Standardization and Amalgamations—Position of the News Print Industry Analyzed

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Canada, December 27, 1927.—Like all other industries the paper trade had its ups and downs during the past year. On the whole, however, the showing has been favorable and, with mills and distributors, the situation today is better and the outlook more promising than expected. Fundamentally, conditions are sound, most plants are operating to capacity, stocks are well in hand, demand has become stabilized and operating costs are being reduced while economies are being put into effect in nearly every department.

There is no doubt that the paper business, like all other activities, is undergoing a change and the trend is toward centralization, standardization and amalgamations. It has been particularly true in the news print line for several important mergers have taken place within the past few months and more are in prospect while the establishment of a news print agency in Montreal to handle the output of a number of mills, has resulted in keeping that branch of the industry on a fairly even keel notwithstanding that sixteen or seventeen new machines, with a total capacity of about 1,700 tons, were placed in operation during the past year.

The rated output of the Canadian news print mills is now bordering close on to 9,000 tons a day when the plants are operating at full capacity. A number of other machines will come into commission during 1928 but it is believed that the program of rapid expansion, which has been taking place in the news print industry will be halted by the action of the Governments of the different provinces in not granting further timber concessions to any new concerns. Rather are assurances given that present existing plants will be taken care of in the matter of adequate limit holdings.

Book plants have been well employed during the past season and of late wholesalers report it has been hard work to get deliveries from some mills. In book papers the finer grades are meeting with a larger sale than cheaper ones while in bonds the cheaper have a stronger call than the dearer ones. Of course the market depends very largely on general business conditions and the showing of plants making flat papers will be more satisfactory in 1927 than it was during the corresponding period of 1926.

Jobbers report that their volume of trade for 1927 has increased by a fair percentage; competition has been keen, orders have been harder to secure and prices in some instances have been cut. It has been found that a wider range of merchandise has to be carried from year to year by the wholesalers and there is a tendency on the part of some printers to buy in larger lots, such as one ton assorted, or three-ton lots direct mill shipment. The relations between producers and distributors have been, on the whole, cordial and frequent conferences have been held during the past twelve months. On the other hand, the relations between the jobbers in Toronto and the Toronto Typothetae have not been quite so agreeable.

### Net Price List Welcomed

The long price list was eliminated some six months ago and the net price list instituted. The new order has been welcomed by the trade on all sides and is now working out to advantage. At first, there was some misunderstanding and delays but now that the system is fairly under way, few, if any, protests are heard. The members of the Toronto Typothetae have been contending that on certain lines the readjustments which went into effect at the time when the long price list was abolished, were too high, particularly on broken reams and ton lots. An investigation has been conducted by the paper trade which shows that, in some instances sales on such a basis really result in a loss and that the only lines on which a reasonable profit can be shown are reams and case lots. Even then they maintain that the margin is not excessive. Taking the returns as a whole, jobbers contend that the complaints of the Typothetae are not justified. An effort is now being made to reconcile the Typothetae and the Ontario section of the Canadian Paper Trade Association so that any misunderstandings will be removed and a closer relationship exist between seller and buyer during the coming months.

The wrapping paper business was only fair during the season but the demand for kraft was steady and the domestic trade considerably increased. The export business in kraft also showed wonderful gains.

In pulp the record for 1927 was not so satisfactory. Those exclusive pulp mills who depend upon selling their output are at a disadvantage today owing to the fact that many paper concerns are practically self-contained and turn out all the groundwood and sulphite pulp they require, while a number have a certain tonnage to sell. Pulp production is, therefore, running ahead of demand and there is no disposition on the part of consumers to stock up. This has resulted in a weakening of prices, with no heavy surplus stocks. It is being recognized now that pulp and paper units go distinctly together. Whatever paper mills may be erected in Ontario in future there will be no isolated pulp plants coming into being.

### Paper Box Business Fair

The paper box business enjoyed a very fair year and of late has been particularly busy. Paper board plants were kept going all the season and two large mills are now being erected in Toronto which will be in commission during the coming year and will add considerably to the output. Whether their market will be able to absorb the additional tonnage, remains to be seen.

Producers of specialty papers had a fair year while toilet and tissues units were well employed. Several fancy new lines were turned out in tissues while an effort is being made to reduce the number of ranges in toilet paper so as to increase production and meet the special needs of the Canadian market.

There is no denying that the paper trade generally is falling into fewer hands and the day of the small jobber has evidently passed. Buying is often spasmodic, large quantities have to be supplied sometimes on very short notice, wants have become multiplied, deliveries are more frequent and insistent, and there is every evidence that volume must be secured in order to make a profit. The number of jobbers is decreasing but new branch warehouses are being opened at different points in order to give quicker service and reduce freight charges on delivered goods.

During the past year there were very few price changes. Adjustments took place on a few lines but, in the levelling up when the whole range is considered, it is doubtful if quotations are any higher than they were last year except on the more expensive brands. Credits have had to be watched very closely during 1927 and collections were promptly made.

The wholesale paper business today is becoming a much greater burden to face than in the period before the war, in that overhead costs are constantly increasing, the selling force has to be added, the warehouse staff augmented, more deliveries made, more rapid service given, more lines carried and in greater volume, while competition is keen. However, in spite of all these handicaps the paper trade has come through the past year with less financial fatalities than possibly any other calling in Canada.

The outlook for 1928 is regarded as bright although no one expects that conditions will partake of anything like a boom. Confidence is a basic factor in the situation at the present time and the vision of the different units of the industry is clearer than it has been. Just to what extent turnover will grow or what changes will take place in prices, remains to be seen, but judging from present indications, the paper procession will go along during the coming twelve months pretty much the same as it did during 1927. At times there were complaints of business being dull, but when the books for each month were closed, it was found that the aggregate, in nearly every instance, topped last year and exponents of the industry are in a better position than they really thought they were. The service of the mills and of the jobbers has been speeded up during the past season and, with good merchandising methods and the adoption of sound trade ethics, there is no reason why pulp and paper votaries should not experience during 1928 a greater volume of business, more stabilized prices and larger net returns than they have during the twelve months of the year now drawing to a close.

## News of the Boston Paper Trade

BOSTON, Mass., December 27, 1927.—The T. C. Greene Paper Company, of which Thomas C. Greene is treasurer, reports excellent results for the first six months in business. This concern handles printers' and publishers' papers.

John Carter & Company, Inc., who have been selling agents for Interwoven Cover, have now added the double thick in antique and ripple finishes in all colors. This gives a complete stock of double thick cover in Boston.

The December "How," A. C. Howland, of Tileston & Hollingsworth Company, editor, contains a description of Flemish Book, which is made in white, India, and gray.

The Tileston and Hollingsworth Company, for the fifth consecutive year, is sending to the printers of New England its calendar of typographic specimens. James G. Clarke, of the Wood, Clarke Press, is to give a criticism of the typography and a Boston advertising man is to analyze it at a meeting of the Boston Typothetae at the Boston Chamber of Commerce January 12. The Boston Printing House Craftsmen are to give an analysis and criticism of the calendar at the Hotel Westminster, January 19.

William C. Steck and John Engelke, of the William V. Steck Company, New York, were in Boston for a few days last week.

Frank W. Power, head of the manila department of the Carter, Rice & Co. Corp., and well known in the trade, who has been seriously ill at his home for a week or more, is improving and is expected to be out in a few days.

## Buys U. S. Holdings in Bathurst Co.

The report is now confirmed that a substantial American interest in the Bathurst Company at Bathurst, N. B., has been acquired by A. J. Nesbitt, of Nesbitt, Thompson & Co., investment bankers, of Montreal.

It will be recalled that three offers were recently made for Bathurst, one of which was by Mr. Nesbitt, his offer standing at 101 for the stock as against 80 by the Holt Gundy interests and a later offer of 105 by International Paper. While it was understood at the time that the Bathurst board had committed itself to the Holt Gundy offer before receipt of the higher offers the Street has been expecting for some time to hear of some further developments which might make it possible for the Bathurst Company to obtain the advantages of the later bids.

The Bathurst company's pulp and paper plant is advantageously located on tidewater in northeastern New Brunswick, and it owns valuable timber limits contiguous to the mills. It also owns water powers capable of developing 60,000 horse power. The mills have a capacity per day of 130,000 lbs. of news print, 160,000 lbs. of ground pulp, 100,000 lbs. of sulphite fiber, and 100,000 lbs. of kraft pulp.

## Boston Paper Trade Generally Quiet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., December 24, 1927.—Christmas week was generally quiet in the paper trade here, although some houses handling fine lines reported a good business. The closing days of the year are expected to be seasonally inactive, but values are generally firm, with few, if any price changes. Whatever orders have been received are largely for delivery after January 2.

The box board industry has been in about the same position for the week with the usual pre-Christmas dullness obtaining. This season is said to be even duller than some previous years. Some of the mills have marked down the price of filled news board to 47.50, delivered New England points, compared with a previous price of 50.00, although a number of the larger mills are quoting from 47.50 to 50.00. Some concerns have also marked down the price of chip board, now quotable at 45, compared with a previous price of 47.50. It is rumored that the bigger mills are to be closed for a few days, ending January 3. The box board trade is optimistic and it is expected that prices will be back at former levels after the turn of the year.

The holiday season has tended to depress the value of mixed paper because more comes on the market at this time of the year and the No. 1 grade is now quotable at .50 to .55, f.o.b. Boston, against the former range of .55 to .60. Other grades of old papers remain at the same levels of a week ago. Values of bagging and new and old domestic rags continue the same, with the exception of roofing rags, which have advanced slightly.

Foreign rags are unquotably changed, except that dark cottons are quotable at 1.60, against a former price of 1.65. Cotton twine is a little easier, but other grades are at the same levels.

## Hudson River at Highest Point

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., December 27, 1927.—With the water in the Hudson River at the highest point in recent years the local plant of the International Paper Company has been hampered in its operations for several days. Early this week the water became so high that parts of the plant were forced to suspend work and for a time the entire plant was on the verge of a shutdown when water flooded the cellar of the mill. Coupled with the high water formation of anchor ice and slush in the river below the falls at the mill resulted in a solid mass which held the water back.

Attempts were made to dynamite the huge masses of ice and slush in the river but this was given up for several reasons. The slush was six and eight feet deep in places which made it impossible to place dynamite in the mass and the explosion it was said would only have scattered the slush and would have had little effect on the jam.

The Hudson River from the International Mill to Spiers Falls, a distance of five miles, is a solid mass of ice and snow. Efforts to open up a channel through the mass have proved unavailing and a more serious situation will be avoided only if the slush melts which will have the effect of lowering the water.

At one time early in the week the river rose five inches in five minutes and dropped back as quickly setting a new record for flood waters. Workers at the International mill were busy jacking up all machinery that was liable to damage from the high water and firemen and engineers were guarding the boilers.

## Harrisville Paper Co. Expands Operations

HARRISVILLE, N. Y., December 27, 1927.—Operations at the revamped mill of the Harrisville Paper Company are being gradually extended and many of the old employees of the Diana Paper Company are returning to their former positions. The office which was maintained by the Diana Paper Company has been moved to the paper mill by the new owners and the building vacated by the office force will be converted into a dwelling for one of the mill department heads.

# Fox River Valley Pulp and Paper Mill Doings

## Post-War Venture Abandoned and Property of Valley Paper Mills Co. Is Disposed Of—Kimberly-Clark Mill Employes Turn Over Safety Checks to Christmas Fund For Dependents of Men Killed in Collapse of Beater Room

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., December 24, 1927.—The final chapter is being written in a post-war venture which never came to fruition, through announcement that the property of the Valley Paper Mills Company is to be sold. Stock was subscribed, a mill site purchased, and the foundation laid. The location was ot be at Neenah, Wis.

Building operations were halted when the depression of 1921 came, and attempts to revive the company since that time have met with no response. The officers have now voted to dispose of the property, consisting of twenty-five lots. There is little prospect that a mill will be developed at this site.

### New Fox River Dam Half Completed

Although hampered by snow and extremely cold weather, the C. R. Meyer & Sons Construction Company has completed half of the new $100,000 dam on the Fox River at Appleton, Wis. The structure replaces the worn out "middle" dam used by the Fox River Paper Company and others. It is necessary only to set up the sluice gates and the coffer dams then can be removed from this section. Water will be sent through these gates so that the dam will have an outlet while work is in progress on the other half.

### New Bleaching Process

An important new bleaching process has been developed by Dr. Otto Kress, of Appleton, Wis., and is being used by the Thilmany Pulp and Paper Company, of Kaukauna, Wis. A patent has been granted Dr. Kress on his process, according to advices from Washington, D. C. His method provides a formula for making a lighter colored kraft pulp without reducing the strength of the pulp.

A patent has been granted to Charles Proctor, a paper machine mechanic at the Biron division of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. He has perfected a mechanical device for taking paper over the presses. After exhaustive tests, the invention has made good and is now being manufactured for the market by the Nekoosa Motor and Machine Company, Nekoosa, Wis. It has been successful on the fast print machine of the Consolidated mill as well as other machines. Mr. Proctor devised a sliding and adjustable blade, similar to a doctor blade. This blade is applied against the press roll, cutting off a web from one part of the roll to which it is adherent and deflecting it toward and carrying it to another part of the machine without breaking the fabric after separating from the press roll. An aluminum roller sometimes is required on the first press to press the paper web against the felt in its journey toward the dryers. Several minutes or more are saved on each wet end break and there is no maintenance cost involved, as is the case with air and like devices.

### Training Classes for Foremen

Training classes for foremen of the pulp and paper industry will be conducted during the spring months in various vocational schools of Wisconsin, according to H. G. Noyes, state director. The instruction is not to start until the present evening safety classes for foremen are completed. Mr. Noyes has succeeded in organizing these spring classes at Appleton, Rhinelander, Green Bay, Neenah, Menasha, Marinette, Wausau, Eau Claire and Wisconsin Rapids. Twelve lessons are to be offered, covering the responsibilities of foremen over men, materials, processes and machinery. Assistance will be given by H. C. Thayers, of Madison, Wis., state supervisor of trades and industry; R. L. Welch, of Stout Institute, Menomonie, Wis., and W. Bouffard, Appleton, Wis., instructor in evening paper making classes for employees.

### News of the Trade

Ground floor offices have been engaged in the Whalen Building at Port Arthur, Ont., by the Newaygo Timber Company, a subsidiary of the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis. The offices formerly were on the second floor of this building, but crowded conditions caused the leasing of the site formerly occupied by the Bank of Montreal. The Newaygo Company has grown to be an important subsidiary. It employs in the woods and in various other departments 500 to 600 men. It has working limits and properties scattered all the way from Minnesota to the Algoma Central Railway on the east. Four large camps are in operation about 450 miles east of Port Arthur, and the company maintains a fleet of large tugs and barges for shipping and towing pulp wood to Port Arthur and to Wisconsin loading points for the Consolidated Mills.

Shipment of heavily soaked pulp in winter without freezing has been solved by the Interlake Pulp and Paper Company, Appleton, Wis., through the use of refrigerator cars. It is found that the cars maintain a uniform temperature and the pulp is not affected by the outside cold. Pulp therefore can be delivered to other mills without the waste of time thawing it out before use. The railroads are glad to supply refrigerator cars because there always is a surplus of these in winter.

Every employee of the Kimberly-Clark Company's mill at Kimberly, Wis., who was entitled to a $5 safety check, contributed that amount to a Christmas fund for families which suffered through the death of men who were killed when the beater room collapsed last October. The total of the checks was $1,445, and each stricken family was given a $200 bond and a check for $83. This world record mill started its safety activities at zero on November 1 and will again attempt to build its record to a pinnacle never reached before. The beater room tragedy was voted by the employees as a mill accident for which no one was responsible. The "man days" of safety therefore were figured up ending on October 1. All departments having 300 or more years of man days of safety were entitled to a check for $5 for each man, and these gifts were turned over the widows.

Dan Hardt, former publicity director and assistant to the president of Lawrence College, Appleton, Wis., has engaged with the Neenah Paper Company, Neenah, Wis. He assumes his new position January 1 and will be associated with the sales force.

## Stevens Paper Mills Move Into New Offices

WINDSOR, Conn., December 27, 1927.—The clerical staff of the Stevens Paper Mills last week moved into its new office building at the mill.

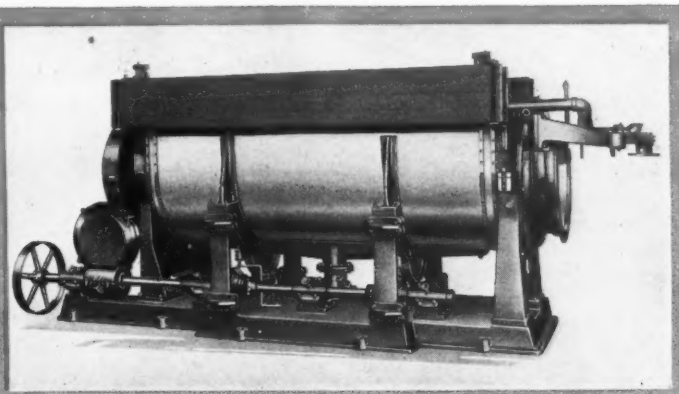
The mill employees of the company presented C. N. Stevens, president, at Christmas with a very handsome cathedral chime clock for his new office.

## E. H. Burton Leaves A. P. W. Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., December 27, 1927.—E. H. Burton has resigned as vice president and sales manager of the A. P. W. Paper Company of this city. Mr. Burton has made no definite plans for the future as yet.

# A record breaking year for Bird Screens



**More Bird Screens have been installed in 1927 than ever before in one year. This in spite of the fact that the Bird Screen has long been the accepted standard of the world.**

**Could stronger evidence be supplied as to the superiority of the better Bird Screen?**

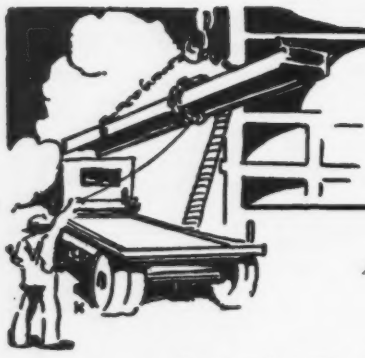
**BIRD MACHINE COMPANY**
South Walpole
Massachusetts

a better
BIRD SCREEN

BIRD
MACHINERY

*Twenty odd thousand tons of paper pass through Bird Screens daily*

1357



# CONSTRUCTION NEWS

*A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills*

## Construction News

**Kelso, Wash.**—The Kelso Paper Company has plans in progress for a new pulp mill in the northern part of the city, on site near the plant of the Kelso Shingle Company and plans to break ground early in the New Year. The former boiler house and warehouse of the shingle company will be utilized in connection with the new mill, with erection of pulp units on adjoining land, reported to cost in excess of $200,000, with machinery. C. C. Hockley, Northwest Bank Building, is engineer. Earl Knight, Kelso, is treasurer.

**Albany, N. Y.**—The Albany Perforated Wrapping Paper Company, operated by the A. P. W. Paper Company, has plans maturing for the construction of a new paper mill in Nova Scotia, where site has been selected at Avon River. It will consist of main building, and auxiliary units, reported to cost close to $150,000, with equipment. It is understood that work will begin within the next 60 to 90 days. A list of machinery to be installed will soon be arranged.

**Baltimore, Md.**—To provide for its complete plant project, the Maryland Paper Mills, Inc., 5 Hopkins Place, Robert A. Wilson, secretary and treasurer, has engaged R. Munson, 609 Southern Building, 15th and H streets, N. W., Washington, D. C., engineer, to design future plant units for its mills at Glenburnie, near Baltimore. Plans are under way for a second unit, following arrangements for erection of first building, recently announced, to be used for pulp manufacture. It will be one-story, estimated to cost close to $200,000, with machinery. It is understood that bids will be asked on general contract in the spring. Preliminary plans also are in progress for additional mill units, to be two-story, reported to cost in excess of $300,000. It is expected that the last noted work will mature during the summer or early fall. These buildings will be equipped for paper manufacture. The initial building, for which superstructure will soon be under way, will be one-story, 150x200 feet, and will be equipped for the manufacture of paper bags and containers. William W. Ormsbee is president.

**New York, N. Y.**—The Creative Box Corporation, recently formed with a capital of $20,000, plans the operation of a local factory for the manufacture of paper boxes and containers. The company is headed by Sidney Rothberg and Morris L. Karten, 1419 Shakespeare avenue, Bronx, New York.

**Danville, Ill.**—The Sears Paper Box Company, Industrial avenue, is said to be planning the erection of a new addition to its plant for increased capacity, to be one-story, reported to cost close to $24,000, with machinery. It is expected to begin work in the spring. An architect will be selected at an early date. M. Sears is president.

**Newark, N. J.**—Kelly & Co., 780 Frelinghuysen avenue, manufacturer of paper mill supplies, have begun the erection of a new addition to their plant, one-story, estimated to cost approximately $55,000, with equipment. A building permit has been issued.

**Cloquet, Minn.**—The Northwestern Paper Company, Cloquet, has plans maturing for proposed expansion at its local mill and is expected to begin work early in the New Year. It will be two and three-story, reported to cost close to $1,000,000, with machinery. The structure will be used largely for the production of kraft papers and will provide large advance in present output. The pulp division will also be extended. The Jacobson Engineering Company, Plymouth Building, Minneapolis, Minn., is engineer.

**St. Helens, Ore.**—Officials of the McCormick Lumber Company are said to be perfecting plans for the construction of a new pulp and paper mill on site selected on the Columbia River, to consist of several units forming a complete self-contained paper-manufacturing plant, reported to cost in excess of $2,000,000, with machinery. H. F. McCormick is vice-president. It is said that a subsidiary company will be formed to carry out the project.

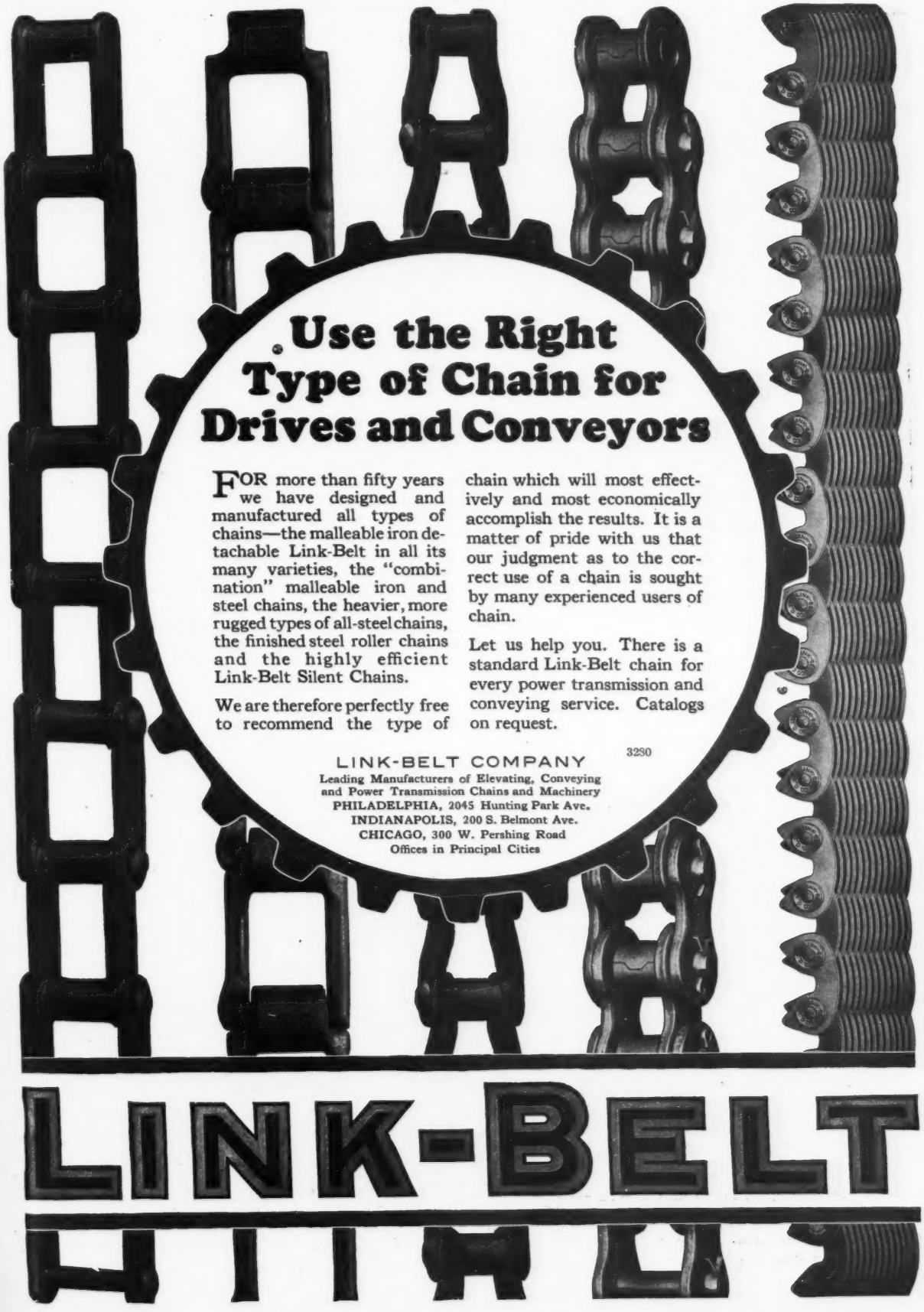
**St. Paul, Minn.**—In connection with its proposed plant addition and power house extensions, the Waldorf Paper Products Company, Myrtle street and Pillsbury avenue, is planning the installation of new boilers, generating unit and other primary power equipment, including switchboard, instruments, etc., and is said to be planning to ask bids on such equipment immediately. Additional papermaking machinery will also be installed. Ralph D. Thomas, 1200 Second avenue South, Minneapolis, Minn., is engineer, in charge. M. W. Waldorf is president.

**Port Townsend, Wash.**—The Rainier Pulp and Paper Company, Seattle, Wash., affiliated with the Zellerbach Company, Sacramento, Cal., has superstructure work under way for its proposed new pulp and paper mill, and will push the project to completion. The initial plant is reported to cost approximately $2,500,000, with machinery, and will be equipped for a capacity of about 150 tons per day. V. D. Simons, 435 North Michigan avenue, Chicago, Ill., is consulting engineer, in charge.

**South Bend, Ind.**—The Empire Box Works, 518 West Monroe street, Chicago, manufacturer of paper boxes, printed cartons, and kindred paper goods, will soon proceed with the erection of a new local plant, for which general contract recently was let to the Hay-Weaver Company, 2300 South Main street, South Bend. A site has been selected on West Sample street; the factory will be one-story and basement, 225x275 feet, brick and mill type, and is estimated to cost about $100,000, with equipment. Complete ventilating equipment and other mechanical facilities will be installed. W. M. Ellwood, Christman Building, South Bend, is architect.

**Georgetown, Ore.**—The T. G. Taylor Company, Portland, Ore., represented by Allen B. Engle, Dexter-Horton Building, Seattle, Wash., has tentative plans under advisement for a proposed new pulp and paper mill on local site. A plan of financing is now under way, and it is understood that a new company will be formed to construct and operate the plant. It will comprise several units, with equipment for a capacity of 120 tons per day. The project is estimated to cost in excess of $2,000,000, with machinery.

**Bremer, Que.**—Eugene St. Jean, 59 Main street, Hull, Que., representing a company specializing in fiber board products, with headquarters at Glens Falls, N. Y., name temporarily withheld, is closing negotiations for a tract of land near the Bremer station of the Canadian Pacific Railroad, totaling about 10 acres, to be used



# Use the Right Type of Chain for Drives and Conveyors

FOR more than fifty years we have designed and manufactured all types of chains—the malleable iron detachable Link-Belt in all its many varieties, the "combination" malleable iron and steel chains, the heavier, more rugged types of all-steel chains, the finished steel roller chains and the highly efficient Link-Belt Silent Chains.

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Let us help you. There is a standard Link-Belt chain for every power transmission and conveying service. Catalogs on request.

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LINK-BELT COMPANY

Leading Manufacturers of Elevating, Conveying and Power Transmission Chains and Machinery

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LINK-BELT

as a site for a new mill. The initial unit is expected to cost more than $75,000, with equipment, and it is purposed to have plans drawn as soon as land purchase has been consummated.

**Nekoosa, Wis.**—The Nekoosa-Edwards Paper Company is said to be arranging for the immediate replacement of the portion of its mill recently damaged by an explosion. An official estimate of loss has not been announced. It is understood that equipment will also be secured to take the place of that affected by the explosion.

### New Companies, Etc.

**New York, N. Y.**—Hefter & Company, Inc., has been incorporated with a capital of $100,000, to manufacture paper boxes and containers. The company is represented by Burnsteine & Geist, 276 Fifth avenue, New York, and is headed by M. St. G. Osborne and associates.

**Wilmington, Del.**—The Romeo Manufacturing Company, care of the Corporation Service Company, Equitable Building, Wilmington, has been chartered under Delaware laws with capital of 600 shares of stock, no par value, to manufacture paper goods of various kinds.

**New York, N. Y.**—The Alfred Paper Stock Company has been incorporated with a capital of $20,000, to deal in paper goods. The company is represented by McDonnell & Lebett, Woolworth Building, New York.

**Boston, Mass.**—The C. P. LeRoyer Paper Corporation has been incorporated with a capital of 1,000 shares of stock, no par value, to manufacture and deal in paper products. The company is headed by Robert J. Holmes, president; and Arthur W. Leavitt, 64 Piermont street, Wollaston, Mass., treasurer and representative.

**Wilmington, Del.**—The Sisal Kraft Products Company, care of the Corporation Service Company, Equitable Building, Wilmington, has been incorporated under Delaware laws with capital of $50,000, to manufacture and deal in paper products.

**New York, N. Y.**—The Beaux Arts Label Corporation has been incorporated with a capital of $20,000, to manufacture paper specialties. The company is represented by Goldberg & Levitt, 415 Lexington avenue, New York, attorneys.

**New York, N. Y.**—The Regent Card and Paper Company has been incorporated with a capital of $10,000, to manufacture and deal in paper products. The company is represented by Henry Pearlman, 63 Park Row, New York.

**Buffalo, N. Y.**—The Thoma & Hewitt Paper Box Manufacturing Company, 62 Watson street, has filed notice of change of company name to the Thoma Paper Box Company.

## Wayagamack Has Profitable Year

Overcoming the adverse influence of a period of generally difficult operating conditions, the Wayagamack Pulp and Paper Company, of Three Rivers, Que., in its annual report for the fiscal year ended September 30th last, reveals a gratifying expansion both in gross and net earnings for the year. The revenue was equal to $7.27 a share on the outstanding capital stock of the company, as compared with $6.56 a share for the preceding 12 months. At the same time a healthy improvement in the already substantial net working capital is revealed.

The profit and loss account shows gross earnings of $1,420,462 as compared with $1,350,266, and, after depreciation of $160,000, stumpage write off at $135,320, and bond interest of $397,500, net income amounted to $727,043, up from $655,982. After deducting dividends of $375,000, surplus was shown at $352,643, and addition of previous surplus brings profit and loss balance to $2,990,589.

## Taylor Stokers at Thunder Bay Mill

Two Taylor Stokers of 10 retorts each have been installed under 1014 hp. B. & W. cross drum boilers at the new Thunder Bay Mill at Fort Arthur, Ont.

## Earl Grant Heads Foremen's Club

DAYTON, Ohio, December 27, 1927.—Paper mill foremen in various Miami Valley towns always have taken prominent part in the affairs of the various Foremen's clubs which flourish in the busy manufacturing centers. Virtually all lines of business are represented, however, in the organization and not infrequently the other industries are represented by the full roster of officers.

At Middletown the past week Earl Grant of the Crystal Tissue Company was elected president of the Foremen's Club in that city, at the dinner held at the Y. M. C. A.

Other officers elected were: Vive president, E. S. Harping, of the P. Lorillard Company; secretary, H. C. Kempf, of the Gardner-Harvey Paper Company; and treasurer, R. Hockmann, of the Rau Machine Shirt Company.

An address was delivered by Frank G. Slutz of this city, an expert in personal psychology and an educator of note. His subject, "Leadership," gave the speaker full sway and it was handled in a masterly manner. He stressed the fact that the foreman is the "key man" in industry and that much depended upon him and the attitude of the men under his supervision.

"Adopt the proper attitude," he advised, "when giving the right kind of criticism. The only way management can reach men in industry is through you, the foreman, the middle man. You should have the ability to receive and give instructions understandingly.

"This combination is not always found. We all have equal rights to vote and other matters but we are not all equal in ability. Some must study harder than others to reach the same results.

"Every foreman should concentrate on being able to be a proper medium by which his men can reach the management, and through which the management can establish a better understanding with men."

## Union Bag Mill To Run on Full Time

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., December 27, 1927.—H. D. Cornell, resident agent of the Union Bag and Paper Corporation, stated last week that the company will endeavor to run on full time during the coming year with perhaps a slight increase in production at the various plants. The past year has been very good especially from the manufacturing viewpoint and approximately 1,100 men and women were employed in the offices and manufacturing plants. The factories will run on the same basis next year with a slight increase in the production which now averages about twelve million bags per day. A temporary lull has been experienced in the business the past few weeks which is more or less usual at this time of the year. The inventory period started Thursday and will continue for a week although not necessitating the shutting down of the entire plant.

It was stated that the two factories now engaged in specialty work have been unusually busy during the past year and although competition is keen in the standard or grocery bag line the corporation hopes to hold its own with other competitors.

The heavy duty imposed by the Canadian government on the wook shipped here from Canada made it necessary recently for the shutting down of the sulphite mill. A kraft pulp mill is being built at Tacoma, Wash., which will start production the latter part of the coming year and the major part of its output will be used by the local plants, it was stated.

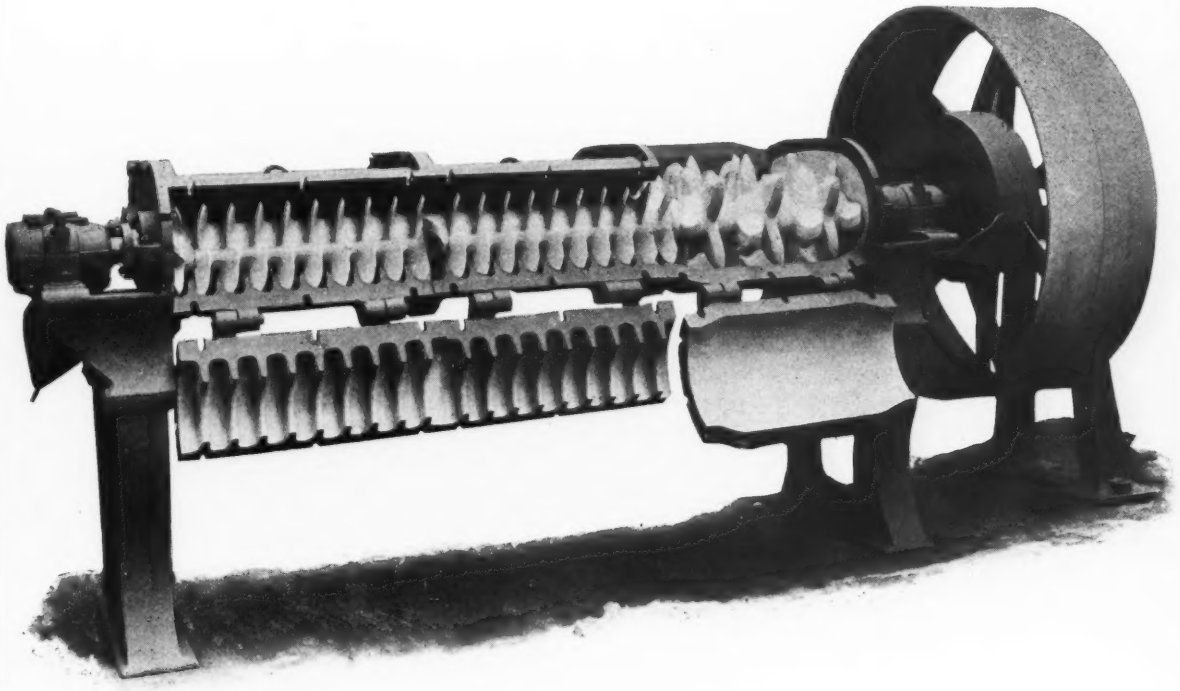
## Melvin Rice Goes With Northampton Mill

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., December 27, 1927.—Melvin Rice, of Watertown, who has a wide acquaintance in paper mill circles of Northern New York, has been appointed superintendent of the Northampton Board Mill, of Easton, Pa. The Northampton Mill is one of a group under the management of P. H. Horan, formerly of Watertown.

# *The* Voith Kneader

***for repulping broke, waste paper, trimmings etc.***



## *Its performance:*

**The Voith Kneader repulps all grades of waste paper, broke, cuttings, trimmings, etc., and delivers the pulp completely disintegrated and in a convenient form for the beaters or the Jordan chest.**

## *Its requirements:*

**Its space, power and labor requirements are considerably lower than those of the broke beater.**

## *Its cost:*

**The advantages gained from its use pay for the cost of the machine in a short time.**

**American Voith Contact Company, Inc.**

**280 MADISON AVE. NEW YORK**

# New York Trade Jottings

W. G. MacNaughton, of the News Print Service Bureau, spent the Yuletide holidays in Montreal, Que.

* * *

Thomas Barrett & Son, paper merchants, announce their removal to their new building at 402 West Broadway, New York.

* * *

The Prat-Daniel Corporation, of 101 Park avenue, New York, manufacturers of the Thermix Air Heater and Stream-Line Stacks, announces that W. H. Caldwell has become associated with them for the handling of sales in New York City and the surrounding territory. Mr. Caldwell is well known to power plant engineers as for a number of years he has been eastern sales manager for a well known soot blower manufacturer.

* * *

Auxiliary committees representing nearly forty trades, industries and professions are playing an important part this year in the annual collection of funds by the United Hospital Fund, to assist 56 non-municipal hospitals in caring for the sick poor. $1,000,000 is being sought for the purpose and these committees, under the general chairmanship of Theodore F. Whitmarsh, are undertaking to raise a third of the total amount required. J. Ogden Bulkley is chairman of the group representing the paper industry and his committee to date has raised a total of $2,773.

* * *

The International Paper Company, New York, has notified holders of its common and 6 per cent cumulative preferred stocks that the company will shortly issue additional 7 per cent cumulative preferred stock and will offer stockholders the right to subscribe to it at $107.50 a share. Holders of the common and 6 per cent issues of record January 3 will have the right to subscribe to the 7 per cent preferred to the extent of one share for each ten shares of either issue held, the subscription to be payable in full January 28, 1928. The proceeds of the sale of the additional preferred stock will be used to reimburse the company in part for capital expenditures made principally in connection with the acquisition of additional timber reserves, in Canada and additional construction. The issue has been underwritten.

* * *

The National Forestry Program Committee, of which R. S. Kellogg, secretary of the News Print Service Bureau, is chairman, are scheduled to meet at the Cosmos Club, Washington, D. C., to make arrangements for the hearings of the McSweeney bill. This measure has been introduced by Mr. McSweeney to insure adequate supplies of timber and other forest products for the people of the United States, to promote the full use for timber growing and other purposes of forest lands in the United States, including farm wood lots and those abandoned farm areas not suitable for agricultural production, and to secure the correlation and the most economical conduct of forest research in the Department of Agriculture, through research in reforestation, timber growing, protection, utilization, forest economics, and related subjects, and for other purposes.

## Adams Bag Co. Buys Coty Machines

ALBANY, N. Y., December 17, 1927.—The Coty Machine Company, of Watertown, through J. V. Coty and T. E. Coty, have contracted to supply the Adams Bag Company, of Chagrin Falls, Ohio, with three additional rotary bottomers, a Coty patented machine for folding and sealing bottoms for paper bags. The company recently installed two of the machines in the Adams Bag plant. The three just ordered will be installed in the Kansas City plant of the Chase Bag Company, the parent concern of the Adams Company. The Adams Bag Company, it is said, has found the new machines so satisfactory that it plans to install them in all its plants.

## Boxboard Production for October

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 5, 1927.—October production of boxboard, based on reports to the Department of Commerce by 91 firms operating 118 plants, reports for earlier months including four concerns now out of business, was 90.9 per cent of capacity, as compared with 93.9 per cent in September and 90.2 per cent in October, 1926. In the following table the capacity data vary according to the normal number of working days in each month.

| Year and Month | Operation: Inch hours Capacity | Operation: Inch hours Operated | Operation: Per cent of Capacity | Production: Short Tons Capacity | Production: Short Tons Output | Production: Per cent of Capacity | New Orders Short Tons | Unfilled Orders (end of month) Short Tons |
|---|---|---|---|---|---|---|---|---|
| 1926 | | | | | | | | |
| October | 10,397,296 | 9,659,004 | 92.9 | 249,782 | 226,180 | 90.2 | 224,829 | 93,263 |
| Total 10 mos. | 102,457,376 | 88,155,434 | 86.0 | 2,461,122 | 2,145,987 | 87.2 | 2,128,827 | ..... |
| 1927 | | | | | | | | |
| January | 9,997,400 | 6,998,505 | 70.0 | 240,175 | 173,629 | 72.3 | 194,285 | 105,669 |
| February | 9,597,504 | 7,583,477 | 79.0 | 230,568 | 189,273 | 82.1 | 183,861 | 102,005 |
| March | 10,797,192 | 8,627,946 | 79.9 | 259,389 | 219,824 | 84.7 | 230,065 | 114,369 |
| April | 10,397,296 | 7,771,040 | 74.7 | 249,782 | 205,589 | 82.3 | 197,435 | 101,861 |
| May | 9,997,400 | 7,759,515 | 77.6 | 240,175 | 198,710 | 82.7 | 192,616 | 93,248 |
| June | 10,397,296 | 8,200,254 | 78.9 | 249,782 | 213,196 | 85.4 | 212,227 | 94,847 |
| July | 9,997,400 | 7,413,384 | 74.2 | 240,175 | 189,875 | 79.1 | 212,434 | 115,097 |
| August | 10,797,192 | 8,885,602 | 82.3 | 259,389 | 232,723 | 89.7 | 227,397 | 112,763 |
| Sept. | 9,997,400 | 8,675,472 | 86.8 | 240,175 | 225,633 | 93.9 | 235,960 | 120,331 |
| Oct. | 10,397,296 | 8,902,325 | 85.6 | 249,782 | 227,149 | 90.9 | 221,548 | 105,600 |
| Total 10 mos. | 102,373,376 | 80,817,520 | 78.9 | 2,459,392 | 2,075,601 | 84.4 | 2,107,828, | ..... |

| Year and Month | Shipments of boxboard Short Tons | Stocks of boxboard, end of month Short Tons | Consumption of waste paper: Capacity Short Tons | Consumption of waste paper: Consumed Short Tons | Per cent of Capacity | Stocks of waste paper, end of month: On hand Short Tons | Stocks of waste paper, end of month: In transit and unshipped purchases Short Tons |
|---|---|---|---|---|---|---|---|
| 1926 | | | | | | | |
| October | 233,593 | 55,650 | 242,138 | 216,871 | 89.4 | 142,830 | 59,076 |
| Total (10 mos.) | 2,138,122 | ..... | 2,385,114 | 2,060,345 | 86.4 | ..... | ..... |
| 1927 | | | | | | | |
| January | 175,528 | 53,562 | 232,825 | 163,337 | 70.2 | 163,023 | 38,062 |
| February | 189,032 | 53,327 | 223,512 | 182,322 | 81.6 | 158,222 | 40,602 |
| March | 217,876 | 54,566 | 251,451 | 209,730 | 83.4 | 155,513 | 43,789 |
| April | 209,944 | 50,211 | 242,138 | 189,942 | 78.4 | 147,938 | 46,314 |
| May | 200 282 | 48,906 | 232,825 | 191,427 | 82.2 | 149,438 | 59,289 |
| June | 210,320 | 52,452 | 242,138 | 205,537 | 84.9 | 151,671 | 43,807 |
| July | 194,131 | 49,519 | 232,825 | 180,822 | 77.7 | 151,094 | 51,520 |
| August | 229,719 | 52,283 | 251,451 | 227,430 | 90.4 | 130,503 | 72,087 |
| September | 228,393 | 49.161 | 232,825 | 216,101 | 92.8 | 127,649 | 53,875 |
| October | 228,222 | 42,026 | 242,138 | 220,974 | 91.3 | 130,647 | 65,308 |
| Total (10 mos.) | 2,083,447 | ..... | 2,384,128 | 1,987,622 | 83.4 | ..... | ..... |

## Another Seattle Paper Mill Projected

PORTLAND, Ore., December 23, 1927.—Plans for the construction of a 120-ton pulp and paper mill in the Georgetown district of Seattle were announced December 14 by the Tom G. Taylor company of Portland. This company will finance the project which will probably, it is stated, run into $2,500,000 or $3,000,000.

The company has applied to the state supervisor of hydraulics at Olympia for permission to divert 16 second-feet of water from the Duwamish river.

The Tom G. Taylor company has been interested in the financial programs of other mills in the Northwest, notably among these being the St. Helens plant at St. Helens, Ore.; the new mill at Tumwater, and at present is concerned with the establishing of a $1,000,000 sulphite plant in connection with the Shaffer Box factory at Tacoma.

## Standard Paper Co. Entertains Foremen

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 19, 1927.—The Standard Paper Company Saturday evening was host to 60 of the concern's foremen and key men, and their wives, at a turkey dinner at the Park-American hotel. W. J. Lawrence, of the Western Paper Makers' Chemical Company, and E. Frank Whittington, chief chemist of the Standard Paper Company, were the speakers. There was also a musical program. B. C. Dickinson, president of the Standard Paper Company, presided.

**Jeffrey Chains for Every Service**

Jeffrey Malleable Roller Chains for heavy apron conveyors handling baled straw.

# For Carrying Baled Straw

This Jeffrey Straw Conveyor at the Ball Brothers Glass Company's plant is built of open spaced maple flights bolted to Jeffrey Malleable Roller Chain to carry straw bales to the digesters.

For loose straw Jeffrey makes a double strand chain and pipe attachment running in a trough for use where it is more convenient to split the bales outside the plant.

Wet straw from the digesters is carried on a Jeffrey Scraper Conveyor, a double strand of Malleable Roller Chain and steel flights in a trough.

Jeffrey has built conveyors for straw board plants for over forty years.

## The Jeffrey Manufacturing Company

931-99 North Fourth St., Columbus, Ohio

New York, Buffalo, Rochester, N. Y., Philadelphia, Pittsburgh, Scranton, Pa., Boston, Cincinnati, Cleveland, Charleston, W. Va., Chicago, Detroit, Milwaukee, St. Louis, Denver, Salt Lake City, Los Angeles, Birmingham, Charlotte, N. C., Montreal

50 YEARS OF SERVICE TO INDUSTRY

# JEFFREY

MATERIAL HANDLING EQUIPMENT

**Jeffrey Products**

- Elevators
- Conveyors
- Portable Loaders
- Coal and Ashes Handling Equipment
- Skip Hoists
- Chains and Attachments
- Sprocket Wheels—Gears
- Crushers—Pulverizers
- Sand and Gravel Handling, Washing and Screening Equipment.
- Locomotives
- Coal Mine Equipment
- Tipple Equipment
- Ventilation Fans

# PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

## For the Month Ending October 31, and for the Ten Months Ending October 31, 1927, as Compared with Corresponding Months of Previous Year

### IMPORTS—PAPER

| | October | | | | Ten Months Ending October 31 | | | |
|---|---|---|---|---|---|---|---|---|
| | 1926 | | 1927 | | 1926 | | 1927 | |
| | Quantity | Value | Quantity | Value | Quantity | Value | Quantity | Value |
| Paper and manufactures (total) | ..... | $12,915,713 | ..... | $13,051,890 | ..... | $114,181,986 | ..... | $121,866,959 |
| Printing paper— | | | | | | | | |
| Standard news print ....lbs...free | 345,205,671 | 11,492,818 | 347,078,733 | 11,609,610 | 3,021,934,220 | 101,345,319 | 3,231,652,983 | 106,932,732 |
| *Imported from—* | | | | | | | | |
| Finland | 7,496,989 | 216,661 | 5,712,246 | 137,031 | 52,292,659 | 1,542,560 | 52,643,208 | 1,465,238 |
| Germany | 1,275,102 | 38,952 | 1,613,560 | 49,851 | 24,274,225 | 721,282 | 11,912,933 | 375,562 |
| Norway | 767,707 | 20,868 | 510,360 | 13,836 | 5,786,316 | 170,842 | 26,108,865 | 704,316 |
| Sweden | 12,223,535 | 356,226 | 7,193,544 | 251,032 | 69,536,325 | 2,104,732 | 108,931,015 | 3,176,684 |
| Canada | 311,469,116 | 10,482,099 | 322,641,190 | 10,779,067 | 2,740,147,391 | 92,602,198 | 2,906,796,009 | 97,048,873 |
| Newfoundland and Labrador | 11,973,222 | 378,012 | 8,280,399 | 344,114 | 128,810,140 | 4,169,445 | 123,045,670 | 4,093,098 |
| Other countries | ..... | ..... | 1,127,434 | 34,679 | 1,087,164 | 34,360 | 2,215,283 | 68,961 |
| All other, n. e. s.....lbs...dut. | 1,430,417 | 67,701 | 890,109 | 43,441 | 13,535,768 | 675,293 | 8,832,888 | 436,811 |
| Grease-proof and waterproof papers..lbs...dut. | 188,945 | 39,122 | 51,104 | 13,235 | 1,881,875 | 330,459 | 1,349,260 | 221,183 |
| Kraft wrapping paper .....lbs...dut. | 280,563 | 14,043 | 1,073,890 | 42,910 | 6,752,161 | 296,190 | 9,070,783 | 387,149 |
| All other wrapping paper .....lbs...dut. | 946,773 | 43,032 | 3,477,412 | 62,037 | 4,909,359 | 325,351 | 7,787,580 | 225,396 |
| Writing, drawing, bond, etc.....lbs...dut. | 215,310 | 71,034 | 297,847 | 89,530 | 3,143,033 | 747,804 | 2,895,409 | 743,633 |
| Surface coated .....lbs...dut. | 172,690 | 67,430 | 212,918 | 83,837 | 1,790,553 | 648,138 | 1,920,365 | 767,180 |
| Tissue paper .....lbs...dut. | 276,597 | 143,987 | 246,014 | 118,585 | 2,449,582 | 1,159,399 | 2,542,606 | 1,421,052 |
| Pulp boards in rolls.....lbs...dut. | 5,902,236 | 142,095 | 4,605,282 | 106,906 | 61,183,801 | 1,487,803 | 49,742,330 | 1,190,464 |
| Other paper boards, n. e. s.....lbs...dut. | ..... | 109,251 | ..... | 62,662 | ..... | 726,197 | ..... | 724,322 |
| Cigarette paper, cigarette books, and covers .....lbs...dut. | 729,005 | 189,408 | 1,019,098 | 293,645 | 6,754,884 | 1,763,437 | 12,954,619 | 3,808,550 |
| Hanging paper .....lbs...dut. | 414,207 | 53,635 | 68,285 | 30,637 | 2,775,943 | 464,433 | 1,812,347 | 496,724 |
| Paper boxes .....lbs...dut. | 214,436 | 82,687 | 227,996 | 141,204 | 1,731,084 | 780,176 | 1,997,391 | 1,138,323 |
| Pulp or papier-mâché and manufactures of, n. e. s. .....lbs...dut. | 124,108 | 35,610 | 70,583 | 21,555 | 1,650,451 | 347,082 | 1,430,941 | 287,975 |
| Duplex decalcomania, not printed....lbs...free | 36,207 | 11,217 | 72,105 | 15,516 | 516,513 | 130,218 | 610,323 | 137,596 |
| All other .....dut. | ..... | 352,643 | ..... | 316,580 | ..... | 2,954,687 | ..... | 2,947,869 |

### WOOD PULP

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mechanically ground wood pulp.....tons..free | 34,931 | 1,064,638 | 18,920 | 507,690 | 227,424 | 6,980,059 | 171,710 | 4,787,038 |
| Sulphite wood pulp .....tons | 79,049 | 5,178,011 | 84,929 | 5,210,677 | 744,775 | 49,048,274 | 739,007 | 47,510,611 |
| Unbleached .....tons..free | 57,620 | 3,462,804 | 61,775 | 3,389,881 | 504,115 | 29,698,150 | 477,369 | 27,052,362 |
| Bleached .....tons..free | 21,429 | 1,715,207 | 23,154 | 1,811,796 | 240,660 | 19,350,124 | 261,638 | 20,458,229 |
| *Imported from—* | | | | | | | | |
| Finland | 8,741 | 524,685 | 4,503 | 220,185 | 52,237 | 2,964,822 | 60,214 | 3,139,989 |
| Germany | 6,927 | 480,543 | 2,101 | 144,646 | 71,226 | 4,820,068 | 40,613 | 2,903,478 |
| Norway | 1,414 | 95,764 | 5,303 | 396,926 | 52,425 | 4,183,827 | 57,077 | 4,303,502 |
| Sweden | 28,943 | 1,820,626 | 39,620 | 2,322,299 | 232,259 | 14,284,389 | 266,070 | 16,130,425 |
| Canada | 30,167 | 2,065,368 | 30,295 | 1,934,925 | 308,536 | 21,075,659 | 285,850 | 19,253,674 |
| Other countries | 2,857 | 191,025 | 3,107 | 182,696 | 28,092 | 1,719,509 | 29,183 | 1,779,543 |
| Sulphate wood pulp, unbleached (Kraft pulp) .....tons..free | 28,936 | 1,802,519 | 33,336 | 2,053,590 | 277,933 | 17,596,760 | 264,095 | 16,272,424 |
| *Imported from—* | | | | | | | | |
| Finland | 1,428 | 78,483 | 2,109 | 97,122 | 20,628 | 1,165,038 | 11,168 | 588,113 |
| Norway | 400 | 24,953 | 263 | 14,038 | 8,935 | 578,836 | 8,443 | 475,953 |
| Sweden | 15,590 | 939,576 | 16,878 | 961,907 | 129,012 | 7,903,015 | 128,695 | 7,668,709 |
| Canada | 11,518 | 759,507 | 14,086 | 980,523 | 116,666 | 7,787,088 | 114,872 | 7,482,688 |
| Other countries | ..... | ..... | ..... | ..... | 2,692 | 162,783 | 917 | 56,961 |
| Sulphate wood pulp, bleached.....tons..free | 859 | 49,877 | 637 | 40,751 | 12,691 | 824,908 | 9,996 | 653,745 |
| Other pulp .....tons..free | 453 | 31,473 | 1,840 | 46,127 | 1,966 | 135,739 | 3,119 | 172,301 |

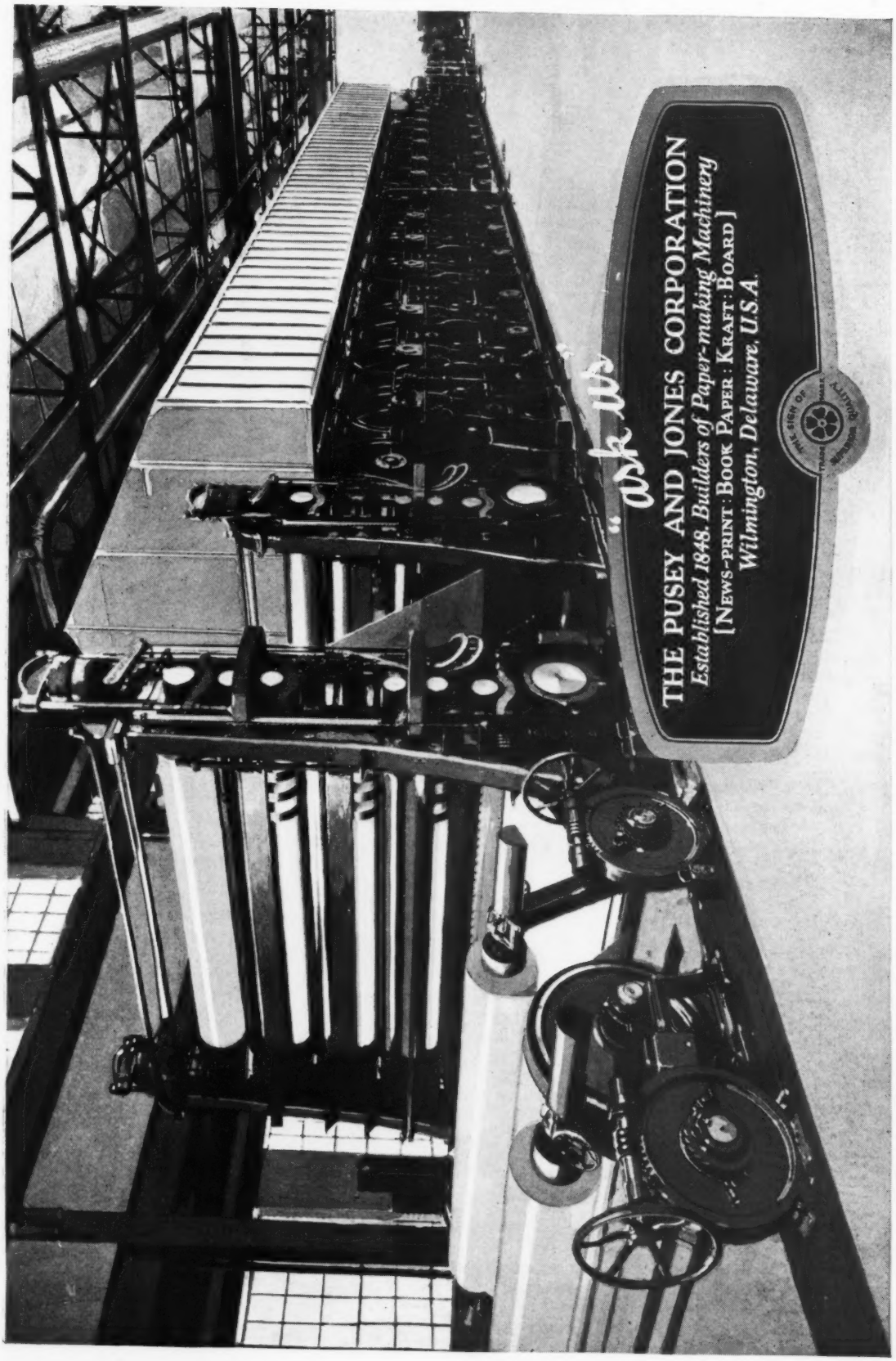
### CRUDE PAPER STOCK

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Rags for paper stock.....lbs...free | 39,237,769 | 827,030 | 32,644,799 | 607,924 | 401,071,656 | 8,823,121 | 311,956,745 | 6,308,775 |
| Waste bagging, waste paper, etc.....lbs...free | 7,116,251 | 120,384 | 11,715,078 | 183,046 | 96,088,559 | 2,012,577 | 87,359,889 | 1,169,894 |
| Old rope and all other paper stock....lbs...free | 4,968,216 | 168,266 | 5,478,362 | 171,208 | 69,185,751 | 2,754,998 | 53,509,740 | 1,661,590 |

### CHEMICALS AND OTHER PAPER MAKERS' MATERIALS

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Colors, dyes, stains, color acids, and color bases, n. e. s.....lbs...dut. | 367,048 | 446,022 | 483,925 | 509,320 | 4,224,842 | 4,735,041 | 4,580,869 | 5,097,163 |
| *Imported from—* | | | | | | | | |
| Belgium | 23,385 | 39,061 | 6,314 | 6,994 | 187,795 | 298,742 | 146,853 | 204,683 |
| France | 21,047 | 29,671 | 12,194 | 14,753 | 152,261 | 202,644 | 146,066 | 168,933 |
| Germany | 126,202 | 139,499 | 263,368 | 272,877 | 1,894,268 | 2,002,640 | 2,734,812 | 2,889,064 |
| Italy | 11,160 | 20,153 | 14,825 | 14,429 | 80,007 | 94,839 | 85,800 | 99,442 |
| Switzerland | 142,791 | 187,989 | 174,575 | 184,370 | 1,623,455 | 1,882,059 | 1,252,851 | 1,525,215 |
| United Kingdom | 17,237 | 18,726 | 8,110 | 8,657 | 147,647 | 146,845 | 136,463 | 137,854 |
| Other countries | 25,226 | 10,923 | 4,539 | 7,240 | 139,409 | 107,272 | 78,024 | 71,972 |
| Casein or lactarene .....lbs...dut. | 1,527,810 | 177,309 | 892,930 | 123,553 | 23,638,090 | 2,540,053 | 21,600,241 | 2,761,122 |
| Kaolin, china, and paper clay.....tons..dut. | 34,682 | 338,236 | 23,877 | 214,542 | 309,082 | 3,051,302 | 252,655 | 2,453,484 |

(*Continued on page 32*)


THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-making Machinery
[NEWS-PRINT : BOOK PAPER : KRAFT : BOARD]
Wilmington, Delaware, U.S.A.
THE SIGN OF QUALITY

*Illustrating the 132-inch Book Paper Machine designed and built by The Pusey and Jones Corporation for the Everett Pulp and Paper Company, Everett, Washington . . . This is the third Puseyjones Machine built for this company and is one of four Puseyjones Book Paper Machines built in 1926.*

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# PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 30*)

## EXPORTS—PAPER

| | October 1926 Quantity | October 1926 Value | October 1927 Quantity | October 1927 Value | Ten Months Ending October 31 1926 Quantity | Ten Months Ending October 31 1926 Value | Ten Months Ending October 31 1927 Quantity | Ten Months Ending October 31 1927 Value |
|---|---|---|---|---|---|---|---|---|
| Paper and manufactures (total) | ..... | $2,204,989 | ..... | $2,281,757 | ..... | $22,385,006 | ..... | $22,368,004 |
| Printing paper— | | | | | | | | |
| News print paper ....lbs. | 2,805,098 | 131,454 | 1,478,206 | 76,870 | 34,202,334 | 1,641,384 | 22,058,421 | 1,054,874 |
| *Exported to—* | | | | | | | | |
| Canada ....lbs. | 150.717 | 9,625 | 295,186 | 18,355 | 1,445,930 | 99,202 | 2,810,914 | 175,950 |
| Central America ....lbs. | 60,853 | 2,868 | 36,722 | 1,492 | 1,044,591 | 47,873 | 587,464 | 30,873 |
| Mexico ....lbs. | 196,488 | 8,593 | 44,748 | 2,223 | 1,013,127 | 51,705 | 604,344 | 27,410 |
| Cuba ....lbs. | 557,437 | 27,604 | 63,511 | 2,530 | 6,331,663 | 285,047 | 4,132,267 | 191,404 |
| South America ....lbs. | 640,018 | 30,131 | 103,339 | 4,197 | 6,886,293 | 311,970 | 5,390,808 | 233,594 |
| China, Hongkong, and Kwantung ....lbs. | 612,405 | 26,548 | 4,200 | 37 | 7,712,823 | 349,171 | 340,024 | 20,666 |
| Japan ....lbs. | 45.800 | 1,832 | 21,540 | 1,805 | 1,903,594 | 84,837 | 98,518 | 6,292 |
| Philippine Islands ....lbs. | 452,433 | 18,412 | 652,812 | 28,278 | 6,351,012 | 324,241 | 6,608,049 | 274,005 |
| Other countries ....lbs. | 88,947 | 5,841 | 256,148 | 17,953 | 1,513,301 | 87,338 | 1,486,033 | 94,680 |
| Book paper, not coated ....lbs. | 1,832,235 | 163,064 | 1,315,767 | 113,231 | 14,519,191 | 1,391,920 | 13,300,512 | 1,153,381 |
| *Exported to—* | | | | | | | | |
| United Kingdom ....lbs. | 6,884 | 868 | 8,664 | 894 | 402,707 | 67,495 | 344,930 | 27,307 |
| Canada ....lbs. | 307,357 | 24,593 | 569,966 | 42,438 | 3,428,849 | 297,250 | 3,357,499 | 267,863 |
| Central America ....lbs. | 43,411 | 4,206 | 35,228 | 2,938 | 531,140 | 56,538 | 296,341 | 28,128 |
| Mexico ....lbs. | 81,891 | 8,131 | 35,299 | 3,741 | 1,287,450 | 131,288 | 463.611 | 48,944 |
| Cuba ....lbs. | 456,596 | 45,077 | 161,726 | 13,703 | 2,415,296 | 224,184 | 2,208,842 | 188,687 |
| Argentina ....lbs. | 62,719 | 4,531 | 22,185 | 2,466 | 487,844 | 42,228 | 714,916 | 58,042 |
| Other South America ....lbs. | 223.845 | 19,921 | 131,493 | 14,155 | 1,476,235 | 146,447 | 1,598,354 | 138,297 |
| China, Hongkong, and Kwantung ....lbs. | 175,572 | 13,278 | 13,029 | 1,313 | 952,923 | 93,150 | 380,205 | 42,432 |
| Philippine Islands ....lbs. | 135,214 | 11,888 | 140,098 | 11,439 | 1,632,732 | 137,586 | 1,734,979 | 134,578 |
| Australia ....lbs. | 36,720 | 4,251 | 95,338 | 11,030 | 450,138 | 52,497 | 730,148 | 78,205 |
| Other countries ....lbs. | 302,026 | 26,320 | 102.743 | 9,114 | 1,453,877 | 143,257 | 1,470,687 | 140,898 |
| Cover paper ....lbs. | 139,799 | 23,207 | 118,833 | 20,497 | 1,194,918 | 214,958 | 1,354,131 | 235,689 |
| Grease proof and waterproof paper....lbs. | 149,255 | 25,794 | 290,789 | 32,523 | 1,942,802 | 295,928 | 2,329,747 | 329,325 |
| Wrapping paper ....lbs. | 3,549,723 | 196,395 | 3,050,531 | 226,626 | 28,031,197 | 1,899,557 | 25,277,790 | 1,831,567 |
| Surface coated paper ....lbs. | 297,054 | 44,892 | 429,555 | 66,198 | 4,996,262 | 630,496 | 5,107,588 | 649,749 |
| Tissue and crêpe paper ....lbs. | 298,272 | 88,099 | 433,257 | 105,982 | 3,461,467 | 888,477 | 3,887,475 | 874,863 |
| Toilet paper ....lbs. | 499,020 | 59,681 | 424,660 | 49,386 | 4,168,834 | 521,931 | 4,431,205 | 544,329 |
| Paper towels and napkins ....lbs. | 183,929 | 30,051 | 185,778 | 28,528 | 1,692,243 | 248,845 | 1,982,584 | 276,400 |
| Box board ....lbs. | 4,163,485 | 120,081 | 3,340,157 | 98,690 | 44,530,083 | 1,261,751 | 37,105,587 | 1,140,213 |
| Bristols and bristol board....lbs. | 88,631 | 9,184 | 104,175 | 11,730 | 1,259,777 | 142,569 | 1,597,805 | 149,591 |
| Other paper board and straw board....lbs. | 3,668,167 | 167,079 | 2,826,533 | 130,709 | 33,230,272 | 1,656,319 | 33,693,718 | 1,819,316 |
| Sheathing and building paper....lbs. | 1,194,508 | 46,919 | 1,022,157 | 41,222 | 9,326,031 | 407,172 | 10,546,008 | 419,448 |
| Wall board of paper or pulp....sq. ft. | 2,759,437 | 90,148 | 4,107,853 | 136,022 | 20,577,563 | 713,149 | 39,470,292 | 1,288,795 |
| Blotting paper ....lbs. | 188,575 | 25,568 | 246,181 | 28,396 | 2,683,426 | 338,181 | 2,835,510 | 322,285 |
| Filing folders, index cards, and other office forms ....lbs. | 61,785 | 16,679 | 136,505 | 33,117 | 678,151 | 198,103 | 901,244 | 256,051 |
| Papeteries (fancy writing paper)....lbs. | 87,429 | 25,688 | 100,330 | 24,156 | 540,229 | 171,995 | 611,195 | 158,304 |
| Other writing paper ....lbs. | 615,844 | 102,764 | 960,813 | 132,613 | 8,258,788 | 1,323,691 | 10,203,076 | 1,512,387 |
| Paper hangings (wall paper)....yds. | 1,229,828 | 41,869 | 4,065,433 | 65,151 | 19,546,839 | 510,278 | 23,973,737 | 507,072 |
| Paper bags ....lbs. | 784,733 | 62.156 | 579,863 | 53,737 | 9,264.084 | 824,851 | 9,538,984 | 821,641 |
| Boxes and cartons....lbs. | 1,803,298 | 139,917 | 2,131,469 | 144,652 | 16,726,627 | 1,196,071 | 19,776,948 | 1,331,151 |
| Envelopes ....lbs. | 202.140 | 37,790 | 199,279 | 32,978 | 2,296,328 | 415,607 | 2,099,482 | 352,760 |
| Vulcanized fiber sheets, strips, rods, and tubes ....lbs. | 333,327 | 110,927 | 259,477 | 77,156 | 4,636,323 | 1,370,847 | 3,550,928 | 1,057,554 |
| Manufactures of vulcanized and indurated fiber ....lbs. | 27,162 | 8,561 | 56,701 | 17,002 | 403,003 | 127,552 | 438,992 | 127,936 |
| Cash register and adding machine paper....lbs. | 157,763 | 16.075 | 109,608 | 15,305 | 1,563,965 | 161.220 | 1,624,211 | 168,430 |
| Other paper and paper products ..... | ..... | 420,947 | ..... | 519,280 | ..... | 3,832,154 | ..... | 3,984,893 |

## WOOD PULP AND PAPER STOCK

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Sulphite wood pulp ....tons | 1,305 | 75,199 | 2,573 | 114,422 | 17,299 | 1,121,079 | 18,363 | 1,007,217 |
| Soda wood pulp ....tons | 65 | 4,781 | 148 | 12.385 | 1,389 | 118,800 | 1,688 | 148,036 |
| Other wood pulp ....tons | 3,112 | 105,723 | 153 | 8,698 | 7,791 | 590,124 | 2,445 | 181,528 |
| Rags and other paper stock....lbs. | 10,945,641 | 173,334 | 18,793,768 | 282,723 | 156,598,550 | 2,222,775 | 180,467,196 | 2,735,607 |

## PAPER AND PULP MILL MACHINERY

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Paper and pulp mill machinery....lbs. | 3,378,097 | 582,051 | 1,828,575 | 356,423 | 13,697,117 | 2,776,071 | 16,804,716 | 3,222,199 |

## Pulp Mill Plans Ready in January

ABERDEEN, Wash., December 23, 1927.—Plans for the proposed pulp plant of the West Lumber and Pulp Company, Junction City, will be ready for contractors about January 1, B. T. McBain, vice-president and chief engineer, stated here yesterday. Contract will be let about February 1, he said.

Work on the site to date has included clearing, filling and sinking of 75 test piles. Mr. McBain yesterday indicated that he was well satisfied with the piling tests and that work would be rushed as fast as possible after plans were complete.

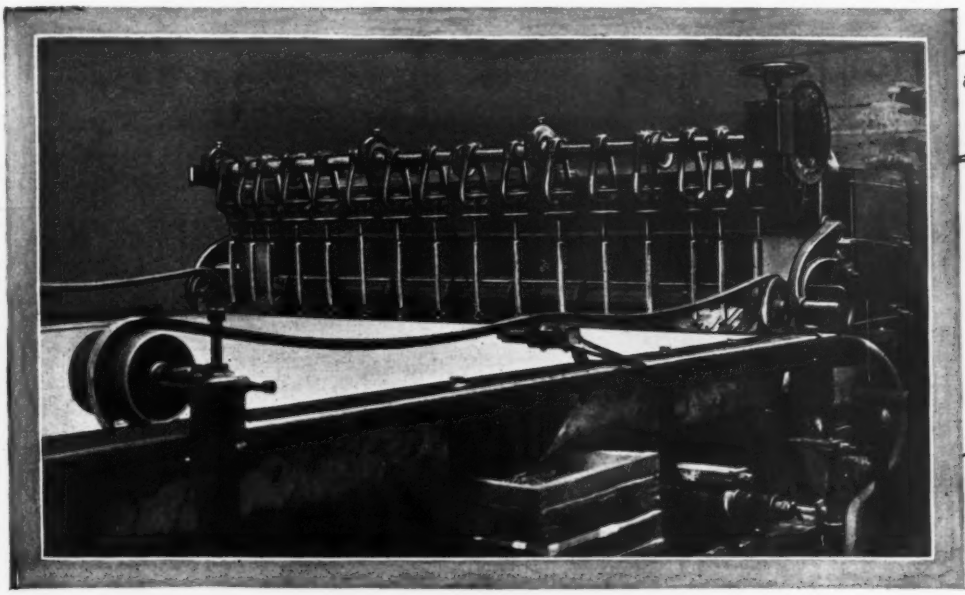
Mr. McBain, with H. D. Schundler, New York, and Herman Kolberg, Portland, was here yesterday to confer with W. E. Johnson, local manager, who has offices in Aberdeen.

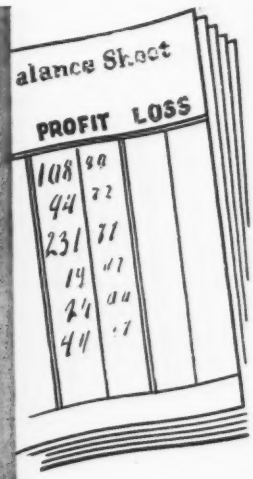
## Packer-Scott Co. Open Medford Branch

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., December 23, 1927.—The Packer-Scott Paper Company have plans completed for opening a branch office in Medford, Ore., December 15, according to Vernon Scott of Portland, vice-president of the company. The firm already have branches in Eugene and Salem, and the Medford branch will serve the southern Oregon territory. A stock of $15,000 will be carried at first with an increase as the market justifies. C. W. Browne, who has been connected with the Portland office for some time, will manage the Medford office.

Arthur Hosfeldt, sales manager for the Packer-Scott Company, is actively engaged in getting the new headquarters established.






# A VOITH INLET Writes Its Own *Testimonial on the Profit Side of Your Ledger~*

Better paper at a lower cost for production—saving of wires so that they last from 10 to 15% longer—fewer breaks causing shutdowns of paper machines—paper of uniform caliper—accurate control of stock as it flows onto the wires. These are some of the items represented by the figures on the ledgers of mills using the Voith Stock Inlet.

Now 225 Voith Inlets are in use throughout the country operating on Straight Fourdrinier, Harper and Yankee machines—and in every instance showing profitable operation. A Voith Inlet truly writes its own testimonial on the Profit side of the ledger.

With our new Deckling-in Device for adjustment between deckles, the operator can deckle-in *while the machine is running.* This device is a new advantage with the Voith Inlet.

Let us show you why the Voith Inlet is a profit-making machine for you to install. An attractive booklet with complete information will be sent you upon request. Write for your copy today.

## VALLEY IRON WORKS CO.

*Machinery for Paper and Pulp Mills*

**APPLETON WISCONSIN**

*New York Office:* 350 Madison Avenue

*Western Manufacturing & Sales Division:*
*Smith & Valley Iron Works Co., Portland, Oregon.*

PAPER TRADE JOURNAL
ESTABLISHED 1872

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Vol. LXXXV New York, December 29, 1927 No. 26

## REFORESTATION IN NEW YORK

The extensive reforestation program sponsored by the New York Development Association which calls for the planting of one billion trees in the next fifteen years and one hundred million trees each year thereafter until the four million acres of wasteland in New York State are made productive should and undoubtedly will have moral and active support from the pulp and paper manufacturers throughout the State. Mr. George A Lawler, managing director of the association with offices at Watertown outlines the need for such cooperation in some interesting observations on this subject recently made by him.

"When Champlain and Hudson explored New York State in 1609" says Mr. Lawler, "they found the entire area forested excepting the prairies of Western Long Island. Throughout the Hudson Valley and the central and southwestern section of the state were magnificant stands of white pine. The Adirondack and Catskill Mountains were covered with heavy forests of red spruce and white pine interspersed with hemlock. Throughout the state were beech, birch and maple and in the southern portion were chestnut, oak, elm and basswood. The early settlers cleared the forests to grow crops and to obtain lumber for building purposes. Shortly thereafter the wholesale cutting of the forests began for lumber, pulpwood and the tanning industries. These forest industries played the most important part in settling the state for as the lumbermen moved farther back into the wilderness to erect their sawmills they founded towns and villages which grew into thriving cities.

"Since 1830 the forest area of the state has shrunk to less than half and the area thus denuded is constanly augmented by the abandonment of the poorer farm lands, over 1,360,000 acres having been abandoned from 1920 to 1925. Of a total land area of 30,498,560 acres in the state approximately twelve million acres now are forests of which four and a half million acres are farm wood lots and seven and a half million acres are in large forest areas. Of the latter forest domain four and a half million acres are in the Adirondacks and one and a fifth million acres in the Catskills. Of these 1,884,663 acres in the Adironacks and 155,254 acres in the Catskills are owned by the state as forest preserves.

"Of the total twelve million acres of forest area remaining only a small part has mature timber, much of the area being cut-over forest, young growth, or idle land. Of the growth now standing 62 per cent is material suitable only for fuel or acid wood. The original forests are being followed by stands of a decidedly inferior quality both as to species and grades. A timber census made during the great war showed only 26 billion feet of standing merchantable timber in the state, of which half is in the Adirondack region and one fourth is unavailable for use because it is on state land.

"New York still leads other states in the value of its paper mill products but in 1926 it was necessary to import three fourths of its supply of pulpwood. The lumber industry is largely gone and the paper industry may be forced to follow, however reluctantly, unless future supplies of raw material are assured near at hand. New York State spends between sixty and eighty millions of dollars yearly for imported timber and another sixty million for freight. Industries depending upon wood for raw material have dwindled, seriously affecting the economic welfare of the whole state. Many communities are entirely dependent upon the local forest industries and when the supply fails the workers and their families move away and the towns are dead. There are many such examples of moribund communities in the Adirondack region and there will be many more if steps are not taken to grow the necessary wood by improving existing forests and planting trees on land now idle. Reforestation is the only key to permanent prosperity of many sections of the state and reforestation alone will solve the problem of idle farm land and keep the forest industries at home."

The St. Regis Paper Company, the Raquette River Paper Company and other prominent paper manufacturing firms are aiding the New York Development Association in carrying on its plans for reforestation which will prove no doubt of great benefit to the entire paper industry of Northern New York. The St. Regis Company maintains a large tract or nursery under skilled hands in conjunction with its paper manufacturing interests and each year plants a number of young trees in connection with its reforestation policy.

## THE SWEDISH SULPHATE INDUSTRY

During the spring and summer months of this year several experts in paper trade circles declared the prospects of the Swedish sulphate industry to be poor, principally because the United States, which is Sweden's largest customer for this grade of pulp, has made considerable extensions in its own production of this article, according to reports received by the Department of Commerce. It now appears, however, that these pessimistic predictions were somewhat premature, and prospects in the sulphate industry, if not too bright, on the other hand are better than they appeared some months ago. That this point is also appreciated by the Swedish industry is evident from the considerable extensions that are under way at some of the existing mills and the new mills now under construction.

The largest of these is the new mill at Marma, which is owned by the Marma Sagverks Aktiebolaget, a saw mill company founded in 1858 and having a capital stock of 1,800,000 crowns (approximately $482,400). The new sulphate mill which will have an annual capacity of 40,000 metric tons will be ready to start production in the spring of 1929. Two other saw mill companies

taking over the production of sulphate pulp are Sandvikens Sagwerks A/B and Munksunds A/B. The former, which has already altered its name to Sandvikens Cellulosa A/B to indicate its changed activities, has under construction a mill with an annual capacity of 15,000 tons. The site of the new mill is on the Angerman River, near Kramfors, and operations are expected to begin in the spring of 1928. The company owns about 160,000 acres of forests, from which it will obtain all the lumber required for its pulp production. Munksuns A/B, a sawmilling corporation with 1,000,000 crowns ($268,000) of capital stocks has recently taken over the greater part of the mills and forests owned by A/B Ytterstfors-Munksund, which has gone into liquidation. The capacity of the new plant will be about 30,000 tons of pulp annually.

Another sulphate mill is being built at Olshammar, near Askersund, but the production of this plant is intended only for the manufacture of paper by the domestic mills and not for exportation of paper and pulp to that country. During the current year exports of sulphate pulp have increased by about 3,000 tons, while there has been a corresponding decrease in shipments of wrapping paper. The growth of the British wrapping paper industry is therefore being observed with great interest, since losses in the line of wrapping papers seem likely to be counterbalanced by increased purchases of raw material.

The formation of a cartel by all of the large sulphate pulp exporters has made it possible to keep the prices of this article stable. Quotations of American buyers have been $2.65 per 100 pounds ex dock New York for some time, while British buyers have been quoted approximately $2.50 c.i.f. English port.

## International Secures Option on Pulp Lands

TORONTO, Canada, December 27, 1927.—President A. R. Graustein and his associates of the International Paper Company, have secured an option on pulp land property held by MacDougal & Hepburn, operating the Alanwater mills in Northwest Ontario. The option on the tract, above Sioux Lookout, does not expire till February, it is stated. So far as is known there is no power included. Sioux Lookout power to be developed on the English River would be available for the operation of these limits. For that reason it is suggested that Mr. Graustein may be personally interested in the present surveys being made by the Ontario Government for a reserve dam on the English River.

Some months ago the Ontario Government, through the Department of Lands and Forests, made a grant of the pulp lands to MacDougal & Hepburn, who were operating the Alanwater mills and limits. It was urged that this was an old industry, that owing to inaccessibility and post-war depression the company had been losing money. More wood was sought so that the company might diversify its activities and seek new markets.

The Government favorably received these representations and made a grant to the company which brought their total holdings up to 2,600 square miles.

## Goes With St. John Paper Co.

HUDSON FALLS, N. Y., December 27, 1927.—Neil Ferry, who was for some time assistant superintendent of the sulphite mill of the Union Bag and Paper Corporation, at Fenimore, which was closed by the company recently, has accepted a similar position with the St. John's Power and Paper Company, of Canada. Mr. Ferry will assume the duties of his new position January 3 and will later move his family from Hudson Falls to Canada.

## New York Mills Ask Lower Freight Rates

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., December 27, 1927.—The hearing in Washington this week before the Interstate Commerce Commission on the petition of Northern New York paper mills to lower freight rates so that the mills will be able to compete with manufacturers in Ohio and other states west of Buffalo was attended by one of the largest gatherings of paper mill men ever seen at a hearing of this nature. More than half a hundred lawyers represented the opposing parties, half of these being ranged on the side of the New York Central and other railroads. The other represented the St. Regis Paper Company, Taggart Bros. Company, Island Paper Company, West End Paper Company, Sherman Paper Company, Iroquois Pulp and Paper Company, all of Northern New York, and a number of concerns in New England who are aiding in the fight on the railroads.

Joseph Quinlin, traffic manager of the St. Regis Paper Company and subsidiary concerns, and Jacob F. Amos, secretary and treasurer of Taggart Brothers, were among the witnesses for the paper mills. Mr. Quinlan argued that the Northern New York district should be a separate rate group. He introduced a number of exhibits, chiefly letters from the New York Central. One said that Watertown should have a lower rate, another that the entire rate construction would be disturbed if Watertown were granted a lower rate and a third that the present rate from Watertown was as reasonable as could be expected.

Mr. Amos said that existing rates were keeping Northern New York manufacturers out of Ohio although shipments had been made to the Mississippi River and even to Kansas but only five per cent of the entire output went as far as the river.

Mr. Quinlan's testimony brought out some very pertinent facts relative to rates to other points in the United States on paper products. For instance the rate from Millinocket, Me., to Chicago, a distance of over 1,100 miles, is the same as from Northern New York, with an average distance of 700 miles, the rate being in both cases 32½ cents on print paper and 44½ cents on bags and wrapping paper. He stated that the object of the present investigation was to get for Northern New York proper recognition by the Commission of its geographical advantage of location. He asked the Commission to order the carriers to discontinue the practice of making rates on paper from Northern New York that are such as to carry the burden of other competing territories such as New England, Wisconsin, Minnesota and Canada. Canada, he said, now produces more than one-half of all the paper in North America while a few years ago the United States produced three times as much as Canada. Mr. Quinlan stated on the stand that the mills he represented were not going to move to Canada but would stay in this country and they "did not propose to die at the hands of the railroads."

## Bryant Paper Co. Issues $1,000,000 Bonds

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 27, 1927.—The Bryant Paper Company announces the issue of $1,000,000 in 6 per cent first mortgage sinking fund gold bonds, dated January 1, 1928, and maturing serially, the final being due January 1, 1948. The bonds are priced at 101 and accrued interest to yield over 5.90 per cent. The denominations are $1,000, $500 and $100.

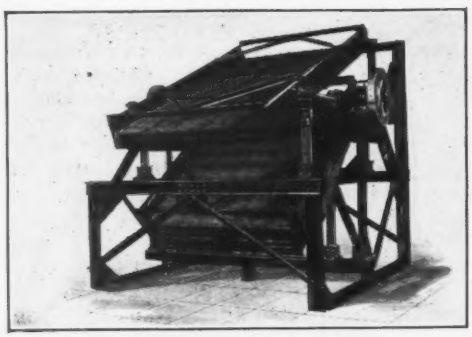
The series is underwritten by the Union Trust Company, Chicago and will be marketed through that agency and in part by the four local banks, Olmsted and Mulhall and George Thomson, bond houses.

According to the statement of the company as of November 10, current assets are $3,219,265.64 and current liabilities $695,305.17. Reserves amount to $378,151.24.

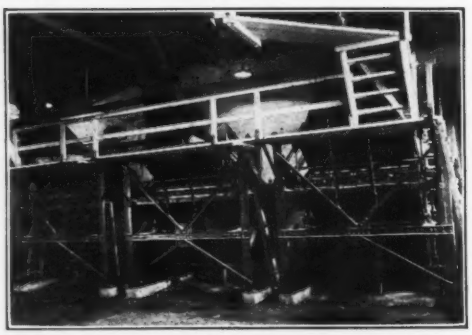
The issue provides for the establishment of a sinking fund with which to retire the bonds. The issue will provide funds for a proposed expansion program.

# RYTHER AND PRINGLE COMPANY
CARTHAGE N.Y.

## RYTHER CHIP SCREEN

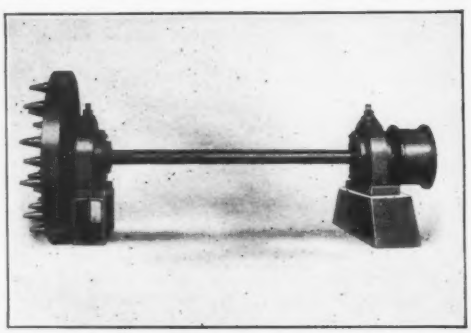


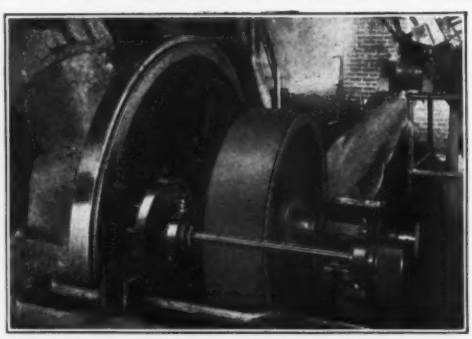
All steel construction
Floor space 10 feet square,
high capacity, 2 H. P. per unit.



Showing rear view of three
Ryther Chip Screens operating
in multiple, 25 cords per hour.

## WOOD CHIP BREAKER





Chips treated by the Wood Ideal Chip Breaker installed under the chipper hood are uniform in size, thoroughly separated, dusted free and clean, ready for screening.

FOR CANADA REFER

CANADIAN INGERSOLL-RAND COMPANY, LIMITED
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Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

# The Value of pH Determinations As A Control Method In The Manufacture Of Sulphite Pulp*

By René Escourrou and Paul Carpentier

The determination of pH values is already being put to good account in many industries. In the leather industry they give valuable indications as regards the tanning process, as the rate of diffusion of the tanning liquors is a function of their pH. In sugar making, best precipitation of impurities in the purification of the juices by lime is obtained at a pH of 7, which is the point of exact neutrality; the decoloration of the same juices with sulphur dioxide proceeds best at a pH of about 3.8, but with charcoal decoration takes place at a pH of 4 to 8 and improves as the value increases within this range.

### Filtration of Industrial Wastes

An optimum pH exists for the filtration of industrial wastes, the exact value of which varies according to the product being treated, and the time of filtration increases if the reaction is either more acid or more alkaline than the optimum value. Hatfield has observed that, in the clarification of turbid water by alum, flocculation is best when the pH of the water lies between 6.6 and 7.6. We have observed that, in the concentration of waste pulp liquors, scaling of the evaporators was much less when working with alkaline liquors which do not flocculate under the action of heat at a pH slightly above 8.

In agriculture it has been found that there is a relationship between the pH of soil extract and the appearance of plant diseases.

It has been known for quite a while that acidity plays an important part in certain paper making operations, and the measurement of hydrogen ion concentration has given a better insight into the importance of this factor. Thiriet and Delcroix[1] have shown that it is advisable to size paper at a pH of about 4.5 to 5.0, and by the use of sulphuric acid they obtained a considerable reduction in the consumption of aluminum sulphate.

### Can Be Used to Advantage in Sulphite Mills

W. A. Taylor[2] has shown the value of pH determinations for controlling various paper making processes, such as bleaching, engine sizing, tub sizing, coloring and coating. On the other hand, he considers that the concentrations of alkali and of acid used in the manufacture of pulp-cooking liquors are too high to lend themselves to control by means of pH determinations. Until quite recently this method of control was considered impossible of application in such cases, and no attempts had been made to use it. We shall show that, on the contrary, it can be used to good advantage in sulphite mills and can give valuable information.

We made comparative determinations by the electrometric method, using both the hydrogen and quinhydrone electrodes, and by the colorimetric method. The latter is preferable by far owing to its simplicity and rapidity, and as the liquors tested are but slightly colored the results are quite satisfactory.

### Preparation of the Acid Liquor

The incrustants which accompany cellulose in wood are removed by means of aqueous solutions of calcium bisulphite, sometimes of magnesium bisulphite, containing a certain percentage of free sulphurous acid. These liquors are prepared by passing sulphur dioxide, obtained by burning sulphur or pyrites, through towers 30 to 35 meters high which are filled with blocks of limestone or of dolomite. The gas as it comes from the burners is first cooled and then introduced at the bottom of the towers, while water (or weak acid from another tower) is introduced at the top; and as the water flows down it becomes charged with calcium or magnesium bisulphite, according to the composition of the stone used. The tower, or "raw," acid is then sent to recovery tanks (or towers) where its free sulphur dioxide content is increased by passing through it the relief gases from the digesters.

### pH Value of the Acid

We made the following determinations:

1) Water supply (containing considerable amounts of dissolved solids)—pH = 8.0;

2) Solution obtained by suspending powdered limestone in distilled water—pH = 7.6 to 7.7;

3) Water which had been sprayed into the burner gases to cool and purify them (Lurgi apparatus)—pH = 1.4;

4) Tower acid;

5) Cooking acid from the recovery tanks.

The following table gives some of the results, selected at random from a large number of tests, all of which were made on different days:

* Translated from *La Papeterie*, xlix, 690-697 (Aug. 10), 737-741 (Aug. 25), 782-786 (Sept. 10, 1927), by A. Papineau-Couture.
[1] Chim. et Ind., Special No., 567-573 (May, 1924).
[2] Paper Ind., 7, 1983-1993 (1926).

| | | Analysis of acid | | | | Increase in Total $SO_2$ |
|---|---|---|---|---|---|---|
| | | pH | H | Total $SO_2$ | Free $SO_2$ | Lime |
| 1 | Tower acid.. | 2.1 | 0.3–0.4 | 33.6 | 19.8 | 12.0 |
| | Cooking acid | 1.7–1.8 | | 38.4 | 25.6 | 11.2 |
| 2 | Tower acid.. | 2.1–2.2 | 0.4–0.5 | 31.0 | 18.5 | 10.9 |
| | Cooking acid | 1.7 | | 43.5 | 32.0 | 10.0 |
| 3 | Tower acid.. | 2.0 | 0.4–0.5 | 31.2 | 20.1 | 10.0 |
| | Cooking acid | 1.5–1.6 | | 41.6 | 30.7 | 9.1 |
| 4 | Tower acid.. | 2.0 | 0.4 | 32.6 | 19.5 | 11.6 |
| | Cooking acid | 1.6 | | 41.6 | 30.7 | 9.5 |
| 5 | Tower acid.. | 2.1 | 0.4 | 29.7 | 17.3 | 10.9 |
| | Cooking acid | 1.7 | | 37.7 | 26.9 | 9.5 |

| | Increase in Total $SO_2$ |
|---|---|
| 1 | 4.8 |
| 2 | 12.5 |
| 3 | 10.4 |
| 4 | 9.0 |
| 5 | 8.0 |

These results show that pH determinations can perfectly well be applied to the control of acid making, as the acid is not sufficiently ionized to bring the value below 1. They can show if the sulphur or pyrites burners are working right: if, through improper adjustment, the gases contain an appreciable amount of $SO_2$, the pH of the spray water used for cooling the gases will fall due to the formation of sulphuric acid, which is highly ionized and which causes a loss of sulphur. The pH can also be used for controlling the uniformity of the acid liquor and its strengthening in the recovery tower.

In another French mill, which used a softer water and filled its towers with dolomite, we obtained the following results:

1) Water—pH = 7.1;
2) Tower acid— pH = 1.9;
3) Cooking acid—pH = 1.6.

$\text{Log } [H^+] = \log a + bm$

In this case the pH was lowered by the presence of a small quantity of free sulphuric acid, as the mill was not equipped with a Lurgi apparatus for washing the burner gas.

**Rate of Diffusion of the Liquor—Effect of Electrolytes**

It may be advisable to vary the pH of the cooking liquor by addition of electrolytes or in any other suitable manner. The best pulp is obtained when the liquor diffuses rapidly and evenly into the chips, and the rate of diffusion depends not only on the temperature, but also on the pH of the liquor, just as does the rate of filtration of waste liquors.

Schwalbe[3] recommends the addition of salts to the water used in the preparation of the liquor in order to facilitate cooking. The improvement which has been observed when this procedure is followed is presumably due to the effect of such additions on the pH of the liquor, which is stabilized and brought into a zone more favorable to the diffusion of the liquor into the wood; in other words, the electrolytes act to buffer the liquor.

Bertrand S. Summers[4] adds trisodium phosphate.

R. N. Miller and W. H. Swanson[5] studied the acid hydrolysis of wood, and arrived at the conclusion that the addition of salts of strong acids to the cooking liquor tend to increase the rate of the reaction, while salts of weak acids decrease it, which leads us to suppose that the reaction depends largely on the hydrogen-ion concentration of the liquor.

This action is similar in every way to the reduction of the swelling power of tanning liquors which have too high an acidity, by addition of common salt, which also makes them diffuse more uniformly.

Pictet's process, on the other hand, which makes use of sulphurous acid solutions free from base, must be carried out under very high pressure to compensate for the poor diffusion of the acid in the absence of salts. Considerable improvement is obtained, however, by addition of even small quantities of ammonia.[6] We do not agree with Cross and Englestad's view as to the catalytic action of the ammonia, which immediately combines with the sulphurous acid: we consider that the improved results are merely due to a variation in the pH, which the addition of ammonia brings into a more favorable range. For example, we found that addition of 0.5 per cent of ammonia to a solution of 40 grams of sulphurous acid per liter raised the pH value from below 1 (which is not at all suitable for cooking) to 1.5.

For the same reason, tests carried out with nitric acid for pulping wood have not been successful because this reagent does not readily diffuse into the wood unless the latter is in a very fine state of subdivision; but considerably better results are obtained with a mixture of nitric acid and sodium nitrate.[7]

**Addition of Chlorides and of Sulphates**

According to Thomas and Baldwin[8] the addition of sodium chloride, or other neutral chlorides, increases the hydrogen-ion concentration of acid solutions, whereas neutral sulphates, on the other hand, reduce it. For example, by addition of 1 to 2 per cent of sodium sulphate to a sulphurous acid solution having a pH value of 1.3 we raised the latter to 1.7, while addition of a small proportion of calcium chlorides reduced it to 1.2.

If the chlorides are placed in increasing order of their power to raise the hydrogen ion concentration of acid solution we have:

$$KCl = NH_4Cl < NaCl < LiCl < BaCl_2 < MgCl_2$$

and this is also the increasing order of their degree of hydration, that is, of the number of molecules of water combined with each cation at high dilutions.

Wilson[9] has found that if the logarithm of the hydrogen-ion concentration is plotted as a function of the concentration of the salt added, the curve obtained in the case of alkali chlorides is a straight line corresponding to the general equation:

$$\text{Log } [H+] = \log a + bm$$

in which (b) is a constant, (a) is the hydrogen-ion concentration before addition of salt, and $[H^+]$ is the hydrogen-ion concentration in presence of (m) molecules of salt per liter. This equation is independent of the concentration of the acid, and the value of (b) depends only on the nature of the alkali chloride used.

The only possible explanation of the fact that the hydrogen-ion concentration is increased by addition of neutral chlorides to an acid solution is that a considerable portion of the water no longer acts as solvent.

By means of the formula

$$F = I - 0.007Hm$$

in which (F) is the pH after addition of (m) molecules of salt per liter, (H) the number of molecules of water combined with each molecule of salt (assuming infinite dilution), and (I) the pH of the acid before addition of the salt, the effect of a neutral chloride on the pH of acid liquors can be foretold.

But the hydration theory is not applicable in the case of sulphates, which reduce the hydrogen-ion concentration. Their effect is probably due to the formation of addition compounds, and is complicated by hydrations.

**Effect of Sulphites**

On addition of 1 per cent of neutral sodium sulphite we found that the pH was raised from 1.6 to 2.1. This is the basis of the Serlachius process (cooking with an acid liquor to which has been added 1 to 2 per cent of sodium ions) for pulping resinous woods by the sulphite process. This reagent has no specific action on the resins, and probably acts through its effect on the hydrogen-ion concentration of the liquor, so that any other salt which would cause the same change in pH should give the same results in the cooking of resinous woods.

Since there is an optimum pH for the precipitation of rosin in sizing, there should also be an optimum pH for the solution of resins, which cannot take place in presence of too high a hydrogen-ion concentration. It would be highly important to determine the exact value of this pH and to bring the cooking liquor to this point when cooking resinous woods.

[3] Ger. pat. No. 414,772, Nov. 7, 1923.
[4] U. S. pats. 1,597,840 and 1,597,841, Aug. 31, 1926.
[5] Ind. Eng. Chem., 17, 843-847 (Aug., 1925).
[6] C. F. Kross and A. Englestad. J. Soc. Chem. Ind., 44, 267-270T (1925).
[7] Krais; Ger. pat. No. 391,173.
[8] J. Amer. Leather Chem. Assoc., 13, 248 (1918).
[9] J. Amer. Chem. Soc., 42, 715-720 (1920).

### pH Value of Woods

The two mills in which our tests were carried out used spruce ("sapin") from Russia and Finland, which was received in the form of logs about one meter long. They were barked, chipped and screened to remove the slivers and sawdust.

We determined the pH of extracts obtained by refluxing 40 grams of chips with 200 cc. of distilled water for 30 minutes. We found that the pH was practically unaffected by the dilution, identical results being obtained on extracting 40 grams with 100 cc. and with 400 cc. of water.

### Logs from Russia

The following results were obtained with three different spruce logs from Russia:

| | 1 | 2 | 3 |
|---|---|---|---|
| Sawdust | 5.0 | 4.8 | 4.8 |
| Knots | 5.6 | 5.2 | 4.7 |
| Good chips | 5.5 | 5.1 | 5.1 |
| Bark | 4.5 | | |

It will be seen that the bark has a lower pH than the sapwood, which is probably due to the higher tannin and lignin contents of the bark. The knots, on the other hand, generally have a higher pH than the sound wood. Six other logs were found to give extracts with pH values ranging from 5.1 to 5.7. Unfortunately, we did not possess all the desired information as regard the age, time of cutting, etc., of these logs. We intend determining the pH values of young woods which easily give easy-bleaching pulp, of old woods in which the lignin content increases with age, and also of diseased wood and of wood which has deteriorated through prolonged storage.

### Other Species of Wood

pH value determinations on a number of other species of wood gave the following results:

| | pH | Color of extract |
|---|---|---|
| Soft woods | | |
| Poplar | 5.7 | colorless |
| White spruce | 4.7 | very light yellow |
| Red spruce | 4.9 | colorless |
| Swedish spruce | 5.3 | colorless |
| Wheat straw | 6.3 | |
| Hard woods | | |
| Ash | 5.5 | yellow |
| Jack pine | 4.1 | colorless |
| Teak | 5.7 | brownish-yellow |
| Elm | 6.5 | yellow |
| Oak | 3.5 | brown |
| Chestnut | 3.3 | reddish-brown |

Hardwoods, which have a higher lignin content, must be treated by the soda process and generally give a lower-grade and more highly colored pulp. Oak and chestnut woods have the lowest pH values, and there apparently is some relationship between their pH and their tannin content. For the same reason spruce bark has a lower pH value than the wood. When sulphite waste liquor from the pulping of a given species of wood is to be used for the preparation of tanning extracts, it would be advisable to select the variety having the lowest pH: spruce from Central Europe seems to be better suited for this purpose than spruce growing in more northerly climates.

### Tests for Controlling the Cook

One of the biggest difficulties in the manufacture of sulphite pulp is to turn out a product of uniform quality. Sulphite pulps are generally compared on the basis of the amount of chlorine required to bleach them; but experience has shown that this does not always furnish an accurate means of differentiation, as pulps cooked by the slow process and by the quick process may have the same chlorine consumption, or even pulps which are hard-bleaching may show the same chlorine value as easy-bleaching pulp.

The Mitscherlich test is the one most generally used for determining when the cook is finished. It consists in adding an excess of ammonia to a sample of liquor from the digester; the amount of calcium monosulphite precipitated out decreases as the cook proceeds and is estimated from the volume it occupies in the test tube. This very simple test gives very useful indications, but is not sufficiently reliable to prevent mistakes.

Zherebov[10] considers that the Mitscherlich test is not accurate, as the monosulphite precipitate is due, not only to the residual sulphur dioxide which has not yet reacted with the wood, but also in part to decomposition of unstable organic compounds which readily give up loosely combined sulphur dioxide.

The titration of the sulphur dioxide content of the liquor is not of much use towards the end of the cook, as the iodine is consumed by certain organic compounds dissolved in the liquor, as well as by the residual sulphur dioxide.

Zherebov therefore recommends a colorimetric method as a control method for the testing of the liquor, as carried out in a Canadian mill. The test, which is carried out with a Hess-Ives tintphotometer, is based on the principle that sugar, gum, lignin and resin solutions, which normally are yellow, turn brown when heated with an alkali hydroxide.

E. Fleury[11] carries out the test in the following manner: to a sample of liquor from the digester add an excess of ammonia and some ethanol or methanol; the depth of the shade acquired depends on the amount of carbohydrates and aldehydes present in the solution, and is compared (after filtration to remove the precipitated calcium and magnesium sulphites) with the color of standard liquors obtained in the production of pulps of known quality.

But the results obtained in this way are comparable only when working with woods and liquors having approximately the same composition, as the final shade depends to a large extent on the initial lime content of the cooking liquor as well as on the amount of carbohydrates and aldehydes present in the solution.

R. H. Moerbeck[12] recommends that, for a given grade of pulp, definite temperature and pressure curves be followed strictly, which can readily be done by means of recording thermometers and pressure gauges; but unfortunately temperature and pressure are by no means the only factors involved in the process.

More recently G. Sivola[13] has patented a test based on the rate of decoloration of a hundredth-normal potassium permanganate solution by a sample of liquor taken from the digester. This method also is not free from criticism, as the rate of decoloration is affected, not only by the residual sulphur dioxide remaining in the liquor, but also by the amount and by the constitution of the organic substances which have been dissolved during the cook.

### Variation of the pH During the Cook

It might have been thought with Taylor[2] that, owing to the high acidity of the liquor, pH determinations would be of no value in following the progress of the cook. We have followed the variation in the pH of the liquor in a large number of commercial sulphite cooks. Below are given the results obtained in three different types of cooks, together with the composition and temperature of the liquor during the cooking and the pressure in the digester:

FIRST COOK—UNBLEACHED PULP

| Time in hours | pH | Analysis of liquor: Total $SO_2$ | Free $SO_2$ | Lime | Pressure | Temperature |
|---|---|---|---|---|---|---|
| 0 | 1.7 | 35.5 | 24.9 | 9.2 | | |
| 1 | 1.7 | 33.6 | 24.6 | 8.8 | | |
| 2 | 1.8 | 29.4 | 19.5 | 8.7 | 1 | 75 |
| 3 | 2.0 | 25.3 | 16.1 | 8.1 | 2 | 86 |
| 4 | 2.2 | 22.4 | 13.1 | 8.1 | 3.2 | 94 |
| 5 | 2.4 | 21.0 | 11.8 | 8.0 | 4.2 | 100 |
| 6 | 2.6 | 19.8 | 10.8 | 7.8 | 4.6 | 104 |
| 7 | 2.6 | 18.5 | 10.5 | 7.0 | 4 | 109 |
| 8 | 2.7 | 17.9 | 9.9 | 7.0 | 4 | 113 |
| 9 | 2.8 | 16.3 | 9.6 | 5.8 | 4 | 116 |
| 10 | 2.6 | 14.7 | 9.3 | 4.7 | 4.4 | 120 |
| 11 | 3.0 | 11.5 | 7.3 | 3.6 | 4 | 123 |
| 12 | 3.1 | 11.5 | 7.7 | 3.3 | 4.2 | 127 |
| 13 | 2.4 | 11.2 | 7.3 | 3.3 | 4.4 | 130 |
| 14 | 2.1 | 9.6 | 6.4 | 2.8 | 4 | 130 |
| 15 | 2.0 | 8.0 | 5.1 | 2.5 | 4 | 130 |
| 16 | 2.1 | 7.0 | 4.5 | 2.2 | 4 | 130 |
| 17 | 2.6 | 4.8 | 2.9 | 1.7 | 4 | 130 |
| 18 | 3.0 | 3.2 | 2.2 | 0.8 | 4 | 130 |
| 20 | 3.0 | | | | | |

[10] Bumazhnaia Promyshlennost, 4, 611-614 (Oct., 1925).

[11] Can. Chem. Met., 9, 16-18 (Jan., 1925); U. S. pat. 1,562,217, Nov. 17, 1925.

[12] Paper, 35, No. 9, 360-362 (1924).

[13] U. S. pat. 1,590,587, June 29, 1926.

SECOND COOK—EASY BLEACHING PULP

| Time in hours | pH | Analysis of liquor: Total $SO_2$ | Free $SO_2$ | Lime | Pressure | Temperature |
|---|---|---|---|---|---|---|
| 0 | 1.7 | 34.9 | 24.0 | 9.5 | | |
| 1 | 1.7 | 32.9 | 23.0 | 8.7 | | |
| 2 | 1.9 | 30.1 | 20.1 | 8.7 | 1.2 | 55 |
| 3 | 1.9 | 30.1 | 20.8 | 8.1 | 1.6 | 65 |
| 4 | 1.9 | 28.9 | 19.5 | 8.1 | 2 | 80 |
| 5 | 2.0 | 26.2 | 16.9 | 8.1 | 3 | 90 |
| 6 | 2.0-2.1 | 25.3 | 16.0 | 8.1 | 3.2 | 95 |
| 7 | 2.1 | 23.7 | 14.4 | 8.1 | 3.8 | 98 |
| 8 | 2.2 | 21.7 | 13.7 | 7.0 | 3 | 100 |
| 9 | 2.3-2.4 | 19.8 | 11.8 | 7.0 | 4 | 105 |
| 10 | 2.5 | 19.2 | 11.2 | 7.0 | 4.6 | 110 |
| 11 | 2.6 | 18.2 | 10.2 | 7.0 | 4 | 115 |
| 12 | 2.7 | 16.0 | 9.6 | 5.6 | 4 | 117 |
| 13 | 2.7 | 14.7 | 8.3 | 5.6 | 4 | 120 |
| 14 | 2.8 | 13.4 | 7.7 | 5.0 | 4.4 | 124 |
| 15 | 2.9-3.0 | 11.2 | 6.7 | 3.9 | 4 | 127 |
| 16 | 2.7-2.8 | 10.2 | 5.7 | 3.9 | 4 | 130 |
| 17 | 2.6 | 5.7 | 4.1 | 1.4 | 4 | 131 |
| 18 | 2.5 | 5.4 | 3.8 | 1.4 | 4 | 132 |
| 19 | 2.5 | 4.5 | 3.5 | 0.8 | 4 | 133 |
| 20 | 2.3-2.4 | 4.5 | 3.5 | 0.8 | 4 | 134 |
| 21 | 2.3-2.4 | 3.5 | 2.2 | 0.8 | 4.6 | 136 |
| 22 | 2.3 | 2.9 | 1.9 | 0.8 | 4 | 138 |
| 23 | 2.2 | 2.9 | 1.9 | 0.8 | 4 | 138 |
| 25 | 2.0 | 2.2 | 1.9 | 0.3 | 4 | 138 |
| 27 | 1.8 | 1.3 | 1.2 | 0.1 | | 138 |

| Time in hours | pH | Analysis of liquor: Total $SO_2$ | Free $SO_2$ | Lime | Pressure | Temperature |
|---|---|---|---|---|---|---|
| 0 | 1.7 | 33.9 | 22.7 | 9.8 | | |
| 1 | 1.7 | 33.3 | 22.4 | 9.5 | 1.4 | 65 |
| 2 | 1.8 | 31.7 | 22.1 | 8.4 | 1.8 | 75 |
| 3 | 1.8 | 30.7 | 21.7 | 7.8 | 2.0 | 85 |
| 4 | 1.9 | 27.5 | 18.9 | 7.5 | 2.4 | 92 |
| 5 | 2.0 | 24.0 | 15.7 | 7.2 | 2.8 | 98 |
| 6 | 2.1 | 21.4 | 13.4 | 7.0 | 3.0 | 104 |
| 7 | 2.4 | 18.5 | 10.9 | 6.7 | 4.0 | 108 |
| 8 | 2.7 | 16.9 | 10.2 | 5.9 | 4.4 | 114 |
| 9 | 2.8 | 16.0 | 9.9 | 5.3 | 4 | 118 |
| 10 | 2.7 | 15.3 | 9.6 | 5.0 | 4 | 123 |
| 11 | 2.6 | 12.1 | 8.3 | 3.3 | 4 | 126 |
| 12 | 2.0 | 9.6 | 6.1 | 3.1 | 4 | 128 |
| 13 | 1.9-2.0 | 7.9 | 6.7 | 1.7 | 4.2 | 130 |
| 14 | 1.9 | 7.0 | 5.7 | 1.1 | 4.3 | 130 |
| 15 | 2.6 | 4.1 | 3.2 | 0.8 | 4 | 130 |
| 16 | 2.9 | 3.5 | 2.5 | 0.6 | 4 | 130 |
| 17 | 2.0-3.2 | | | | | |
| 18 | 3.1 | 0.6 | 0.4 | 0.2 | | |

These results are shown graphically in Figures 1, 2 and 3, on which the temperatures are given in dotted lines.

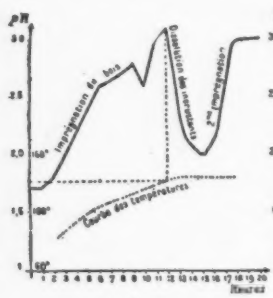


FIG. 1. — CUISSON 1.
Degré de blanchiment de la pâte à 18 %.

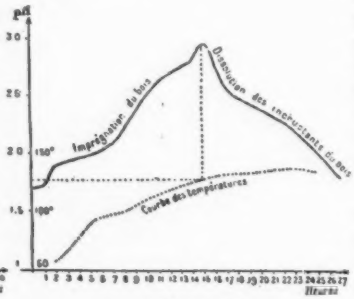


FIG. 2. — CUISSON 2.
Degré de blanchiment de la pâte à 12 %.

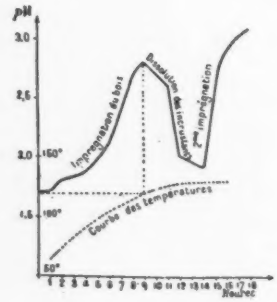


FIG. 3. — CUISSON 3.
Degré de blanchiment de la pâte à 40 %.

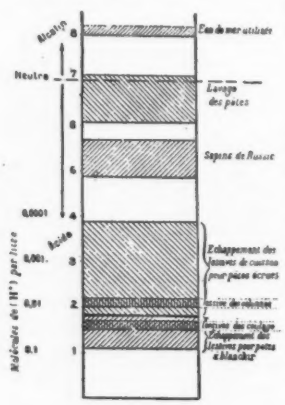


FIG. 4. — ECHELLE DES $p_H$.

## Diffusion of the Liquor Into the Wood

Examination of the curves shows that the pH first rises with the temperature, which corresponds to the absorption of the active constituents of the liquor by the wood. It is a well known fact that when substances having a large specific area are immersed in solutions they frequently lower the concentration of the dissolved substances. This is due to adsorption, which approximately follows the law:

$$w = ax^{b}$$

in which (w) is the quantity of dissolved substance adsorbed by unit weight of the adsorbing body, (x) the final concentration of the dissolved substance in the solution, and (a) and (b) are constants.

The period of impregnation of the wood is extremely important; the main object of the steaming to which the wood is sometimes subjected before cooking is to facilitate this impregnation. It has a far-reaching effect on both the yield and quality of pulp obtained, for the portions of the wood which have not been thoroughly wetted by the acid turn brown but are not properly disincrusted. The acid should penetrate right into the heart of the chips before the temperature has risen to 120° C., at which point the disincrusting reaction actually starts.

Liquors with high free sulphur dioxide are most suitable in this respect; they give a more thorough disincrustation and yield pulps which, though they turn pink on drying owing to some change undergone by the free sulphonic acid residues, are easier to bleach than but not as strong as pulps obtained with liquors having a higher combined.

This adsorption of acid liquors by the wood seems to take place satisfactorily at a pH of about 2, in accordance with the theory of Thomas and Kelly; but it is also a function of the moisture content of the wood which facilitates penetration of the acid by capillarity, and for this reason wet wood generally gives a 1 to 2 per cent higher yield than dry wood. On the other hand, wet wood has the disadvantage of giving pulp with a somewhat higher lignin content, as its moisture content retards the rate of the disincrusting reaction. The surface tension of the liquor must also be taken into consideration, as it governs the wetting power of the acid, which is also affected by the resin and gum content of the wood.

This accounts for the fact that when highly resinous wood is cooked in the usual manner with a calcium bisulphite liquor the yield is only about one-third to one-half that obtained under the same conditions with wood low in resins, and moreover the pulp is quite brown and hard to bleach. But satisfactory results can be obtained with magnesium bisulphite liquors[34] because they diffuse much more readily into the wood; and that is the essential and fundamental advantage of the magnesium-base liquors recommended by Schwalbe.[35]

## Solution of the Incrusting Matter

The curves bring out quite clearly the very important fact that disincrustation of the impregnated wood practically does not start below a temperature of 120° to 125° C. under a pressure of 4 kilos. Consequently the actual time of cooking should be reckoned from the moment when this point is reached. The incrustants which accompany the cellulose then begin to dissolve out and cause a rapid decline in the pH of the liquor. This decline serves as a criterion of the manner in which disincrustation takes place, the latter being best when the pH is reduced as much as possible, but at as low a rate as possible. In making easy-bleaching pulp therefore, it is advisable to reduce the pH to a very low point, but to stop the reaction before the liquor "turns"; at this point there is a sudden change in the color of the liquor, which becomes almost black. When this takes place there is a considerable reduction in

[34] F. Heyerdal and A. S. Thunes, Mek. Verk., Fr. pat. 601,757.
[35] Papier-Fabr., 23, No. 24 (1925).

the yield, which is attributed to the decomposition of an organic sulphur compound which protects the cellulose against the injurious action of acids at high temperatures and pressures.

If the wood has been properly penetrated by the liquor, as in the case of Cook 2, it is seen that disincrustation takes place evenly and the pH falls progressively. But when impregnation is incomplete, the incrustants are dissolved only from the impregnated portions of the wood, with a resultant fall in the pH. When the impregnated portion has been completely disincrusted the remainder of the wood will then proceed to absorb more liquor before further disincrustation can proceed, which causes another rise of the pH, as can be seen in the case of Cooks 2 and 3. This second impregnation is greatly facilitated by the fact that the outer fibers of the chips are partially liberated by the solution of the greater portion of the incrusting matter. If the cook is stopped at this stage, a hard-bleaching pulp will be obtained, and in order to get an easy-bleaching pulp the incrustants which have so far escaped the action of the liquor must be eliminated. This would be manifested by a second lowering of the pH which would be greater according as the removal of the incrustants was more thorough.

As can be seen from the graphs, easy-bleaching pulp is cooked at a somewhat higher temperature (8° to 10° C.) than pulp which is not intended to be bleached. In order that pulp may bleach easily, it is important that it should contain as little lignin as possible, and the time required for its elimination during the cooking process is reduced approximately 50 per cent for each 10° C. rise in temperature between limits of 120 to 150 degrees C., or by increasing the concentration of the acid from 1 to 3 per cent.

According to Svante Arrhenius [16] the rate of the reaction of the cooking liquor on the cellulose and on the incrusting matter can be calculated as a function of the temperature by means of the equation:

$$r_1 = r_{2e}^{A(T_1 - T_2) \,/\, T_1 T_2}$$

in which ($r_1$) and ($r_2$) represent the reaction constants at the absolute temperatures ($T_1$) and ($T_2$). The characteristic constant (A) has a different value for the solution of the incrusting matters and for the solution of the cellulose. But in practice the maximum working temperature is limited by the fact that the sulphur dioxide must be retained in the digester without unduly increasing the pressure. Moreover, as the rate of attack of the cellulose increases more rapidly than that of the incrusting matter when the temperature is raised, too high a cooking temperature appreciably reduces the yield of pulp.

### pH Value at the End of the Cook

We have determined the pH value of the liquor at the end of a large number of cooks. Below are given a number of results, taken at random, together with the bleach requirements of the pulps (amounts of bleaching powder required to bleach them), which is a function of the degree of disincrustation effected during the cook. The pulps requiring 12 per cent or less of bleaching powder are generally sold as "easy-bleaching"; the others are not generally intended for bleaching, and are considered as "hard" or "soft" according to their chlorine requirements.

| pH | Bleach consumption % | Remarks |
|---|---|---|
| 1.7 | 12 | |
| 1.6 | 10 | liquor had "turned" |
| 1.5 | 10 | liquor had "turned" |
| 1.8 | 10 | |
| 1.6 | 11 | liquor had "turned" |
| 1.8 | 12 | |
| 2.2-2.4 | 16 | cooked for "easy-bleaching" |
| 1.1-1.2 | 7 | cooked for unbleached pulp |
| 1.0-2.0 | 12 | exceptional |
| 2.5 | 20 | |
| 2.8 | 22 | |
| 2.5 | 20 | |
| 3.3-3.4 | 30 | |
| 1.1-1.2 | 10 | |
| 1.1-1.2 | 7 | liquor had "turned" |
| 2.8 | 28 | |
| 3.3 | 35 | |
| 2.0 | 10 | exceptional |
| 1.8 | 12 | |
| 3.2 | 50 | knot pulp |
| 2.7 | 18 | |
| 1.3-1.4 | 12 | |
| 1.4 | 10 | |
| 3.4 | 35 | |
| 3.2 | 30 | |
| 2.8 | 15 | Fresk digester filler used |
| 3.9 | 50 | |
| 2.3-2.4 | 18 | |
| 3.0 | 22 | |
| 2.4 | 20 | |
| 1.4 | 11 | cooked for unbleached pulp |
| 3.2 | 28 | |
| 1.9 | 14 | |
| 2.4 | 18 | cooked for "easy-bleaching" |
| 3.0 | 20 | |
| 3.3 | 25 | |
| 2.6 | 20 | |
| 1.4 | 12 | cooked for unbleached pulp |
| 3.4 | 25 | |

### Interpretation of Results

Examination of the above results shows that in the case of this particular mill (using a cooking liquor with a pH value of 1.7), on the whole, when the pH at the end of the cook was below 1.8 the pulp was nearly always easy-bleaching; but when the pH was above 2 the pulps were unsuitable for bleaching, and the higher the pH the harder the pulp. In three of the cooks, in which the Mitscherlich test had shown that the pulp was of the unbleached grade, the stock turned out to be easy-bleaching; this could have been foretold from the pH value of the liquor at the end of the cooks, and in order to obtain the desired grade it would have been necessary to stop the cooks earlier and blow the digesters before the pH had fallen to 1.8.

On the other hand, two cooks which had been run by the Mitscherlich test to produce easy-bleaching pulp gave stock unsuitable for bleaching. Here again pH determinations would have shown that the pulp was not of the desired grade, and that the cooks should have been continued until the pH of the liquor had been reduced to below 1.8.

In another mill, using a magnesium-base liquor with a pH of about 1.6 (pH of the tower acid = about 1.9) prepared with soft water and dolomite, it was found that the pH of the liquor had to be reduced to 2.2 or less in order to obtain easy-bleaching pulp. The exact range of the final pH required to produce the various grades of pulp will vary with the composition of the cooking liquor, and must be determined in each individual mill.

Though the complexity of the phenomena involved in the cooking of wood may not warrant our attaching an absolute significance to the pH values, the fact remains that they are very useful in controlling the commercial production of sulphite pulp. After roughly following the cook by means of the Mitscherlich test, as usual, towards the end the digester house foreman can fix the proper time for blowing the digester by making a few pH determinations, which are very easily and quickly carried out by the colorimetric method.

### Washing and Screening the Stock

When the cook is finished the liquor is drawn out of the digester and water is pumped in to dilute the pulp and facilitate its removal. It is sent to drainage tanks with perforated false bottoms through which the water can drain off and in which it is thoroughly washed.

From the drainage tanks the pulp goes to "openers," which break up the lumps. After dilution it is put through the rifflers, where the heavy impurities, such as sand and dirt, settle out, after which it is screened to remove the shives, coarse fibers and other light impurities which were not removed in the rifflers. The screened stock is deckered and sent to the stock chests, which serve as storage for the pulp until it goes to the pulp-drying machine.

The following are pH values found for the water used as a vehicle for the pulp in the course of these various operations:

[16] Paper Tr. J., 82, No. 15, 65-66 (April 15, 1926).

| | Mill I | | | | | | | | | | Mill II |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| On leaving the "opener" ..... | 6.6 | 6.6 | 6.1 | 6.1 | 6.1 | 6.3 | 6.6 | 7.5 | 6.6 | 6.2 | 6.3 |
| On leaving the riffler ..... | 6.8 | 6.7 | 6.2 | 6.5 | 6.2 | 6.5 | 6.9 | 7.6 | 7.0 | 6.3 | 6.7 |
| At the deckers.... | 6.9 | 6.8 | 6.5 | 6.5 | 6.4 | 6.4 | 7.4 | 8.1 | 6.9 | 6.5 | 6.8 |
| In the stock chests | 7.1 | 7.1 | 6.5 | 6.8 | 6.6 | 6.7 | 7.3 | 7.5 | 7.0 | 6.6 | 6.5 |
| White-water from the drying machine.. | 7.0 | 6.8 | 6.2 | 6.3 | 6.1 | 6.8 | 7.4 | 7.3 | 6.6 | 6.7 | 6.8 |

The white-water from the drying machine is pumped back to the "opener" where it is used, along with a certain quantity of fresh water, to dilute and wash the stock. This procedure effects an important saving in water; but the latter should be renewed whenever it becomes too heavily loaded with salts and resins, as otherwise these impurities will not be properly washed out of the pulp and will ultimately cause "pitch" troubles on the paper machine.

### Interpretation of the Results

Determination of the pH at various stages, and particularly of the white water from the drying-machine, will show when the water ought to be renewed. It was found that when the water of the mill under consideration (which had a pH=8.1) was saturated with resins from the stock it had a pH of 6.1. It will be seen from the figures given above that fresh water should have been introduced into the system in the case of operations numbers 3, 4 and 5; and as a matter of fact in these cases the white-water was heavily loaded with resins, particularly number 5 in which the pulp had been obtained by cooking knots.

On the other hand, the pulp from the digesters, even when diluted with a very large amount of fresh water, gives a pH which does not exceed 7 to 7.1. Hence, the final pH cannot exceed this value unless:

1) An excessively large amount of fresh water is used, which is very wasteful; or

2) The water becomes abnormally charged with soluble products; as was the case in numbers 7 and 8 above, in which low grade pulps containing considerable soluble impurities were being treated.

In the other cases the washing progressed normally.

It follows from these results that, in this particular mill, in order to obtain good results fresh water should be introduced into the system whenever the pH of the drying-machine white-water is found to be outside the range 6.1 to 7.1; but as long as it keeps within these limits operations may be considered normal.

### Indicating the Ranges

In Figure 4 we give a scale indicating the ranges within which the pH should be maintained to obtain normal results in the manufacture of sulphite pulp with an acid liquor of given composition. The use of the hydrogen-ion concentration in sulphite pulp manufacture constitutes a new method of control.

### Conclusions

1) It is important to know the pH value of sulphite liquors, which is one of the main factors in the impregnation of the wood, which in turn has a very great bearing on the cooking process. The size of the chips should be adjusted according to this pH, using thinner chips according as the pH is less favorable to thorough penetration. Presence of chlorides in the liquor is advisable, as they lower and stabilize the pH without addition of strong acids; sulphates, on the contrary, have an opposite effect and are to be avoided. With resinous woods pH determinations are of still greater importance, as such woods are penetrated by liquors falling within a relatively narrow pH range; in such cases chlorides have an unfavorable effect.

2) Woods of the same nature and quality should give extracts with an approximately constant pH. Deterioration of the wood or appreciable variation in the quality would be revealed by an abnormal variation in the pH and would lead to a reduction in yield.

3) The exact time at which a cook should be stopped in order to obtain pulp of any desired quality can be ascertained by means of pH determinations towards the end of the cook; while the variation of the pH of the liquor during the course of the cook gives interesting information concerning the phenomena which take place in the digester and furnish a rational explanation of apparently contradictory results which frequently are obtained. The better knowledge of the complex reactions of disincrustation thus acquired may assist in directing further investigations into the mechanism of the process.

4) By a judicious application of the results of pH determinations the washing and screening of the stock may be carried out rationally and systematically, with a considerable saving in water consumption and without in any way lowering the quality of the pulp.

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## Paper and Pulp Machine Drier Temperatures

SPECIAL INQUIRY No. 93

A member writes:

"I would like to get some information regarding the temperatures of driers on paper machines and on pulp drying machines, and would like to have the following points covered:

1. Machine:
   a. Name of manufacturer.
   b. Type—cylinder or fourdrinier.
   c. Number and arrangement of driers.
   d. Speed and trim.
   e. Tons air dry production per 24 hours.
2. Kind of paper or pulp run over machine.
3. Steam:
   a. How distributed to driers.
   b. Pounds pressure in driers.
   c. Pressure and degrees superheat (if any) in main steam line.
4. Temperature of driers:
   a. Temperature—degrees Fahrenheit on each section or drier.
   b. Where and how measured.

5. If machine is used for drying pulp, what is the per cent oven dry content of the pulp going to the first drier and coming from the last drier, and what is the difference in the strength of the pulp at these two points?"

This inquiry will be handled in the usual manner under the Service to Members plan, and the responses, in blank, distributed as a special report to all who contribute to the discussion. Send replies to

TAPPI,
18 East 41st street, New York.

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## "Rags"

A new and interesting book has just been published by twenty-nine mills making rag content papers. The name of this book is called "Rags."

The avowed aim of the book is to point out in an impartial way the difference between rag and sulphite papers and the uses to which each variety is best fitted.

In past years it has often times been difficult for printers to sell their customers high quality of paper for letter heads, envelopes, documents, etc. Such situations as this can be very materially helped by simply using this new book.

"Rags" is non-technical in nature so that it is easily intelligible even to people not having the slightest knowledge of paper-making. As a result, the book ought to be interesting to business men generally as well as to printers who deal with papers of all kinds in their daily work.

This book is being mailed to paper merchants, printers, and most of the large users of paper in the United States.

# Current Paper Trade Literature

## Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

### Cellulose and Lignin

**General Study of the Chemistry of Cellulose and Its Principal Derivatives. II. Experimental Part.** H. Gault and P. Ehrmann. Caoutchouc et Gutta-Percha 23, 13, 312-13, 313, 13, 888-13, 889 (1926); 24, 13, 453-13, 455 (1927). The experimental work deals with the preparation of cellulose esters of fatty acids containing more than 5 carbon atoms and having a solubility comparable to that of cellulose diacetates already known. A few such esters have been prepared by Grún and Wittka (*Z. angew Chem.* 34, Aufsatzteil, 645-648 (1921) and by Karrer, Peyer and Zega (*Helvetica Chim.* Acta 5, 853-863 (1922)). Absorbent cotton, Girard hydrocellulose and cellulose regenerated from cuprammonium solution, from vicose solution and from alkali cellulose on the one hand, and lauric, palmitic and stearic acids and their acid chlorides on the other hand, were used in the preparations. The cellulose esters were prepared in the ordinary way by adding the acid chloride to a suspension of cellulose in pyridine and chloroform or in pyridine and toluene. From 5 g. of cellulose were obtained 15 g. of cellulose laurate, which resembled the original cellulose and was insoluble in ordinary solvents. With hydrocellulose and palmityl chloride or lauryl chloride, the yield and the composition of the products depended upon the proportions of the reagents and the temperature. Cellulose dipalmitate and cellulose tripalmitate were identified.—A.P.-C.

**Decomposition of Cellulose by Heating Under High Pressure in Both Presence and Absence of Hydrogen with or Without a Liquid Medium Serving to Disperse the Material.** H. I. Waterman and J. N. J. Perquin. Recueil Trav. Chim. Pays-Bas 45, 638-653 (1926). Cotton cellulose rapidly decomposed when heated under pressure and at temperatures of 225° to 450° C., both in the presence and absence of hydrogen. Heating at 225° during 2 hours resulted in a black residue (containing 48.9 per cent carbon and 6.1 per cent hydrogen) resembling coal and equivalent to 85 per cent of the original cellulose. One hour at 300° C. gave 54 per cent of solid residue (containing 71.0 per cent carbon and 5.2 per cent hydrogen), the decomposition products being mainly carbon dioxide and water with a small amount of methane. At 450° C. the residue (containing 85.7 per cent carbon and 5.0 per cent hydrogen) comprised only 37 per cent of the original cellulose, decomposition products being carbon dioxide, carbon monoxide, water, methane and its homologs. In the presence of hydrogen the quantity of hydrocarbons increased slightly, but no other marked effect was noted. Considerable heat was evolved during the decomposition. The heat of combustion of the solid residue obtained at 450° C. was 7832 gramcalories per gram, as compared with 4158 for the original cellulose. Heating the cellulose in the presence of a liquid medium (Borneo petroleum) increased the amount of methene hydrocarbons while the solid residue decreased. Cellulose heated at 300° C. in vacuo gave 38 per cent of a viscous liquid assumed to be an intermediate between cellulose and the solid residue obtained through decomposition under pressure.—A.P.-C.

**Process for Making Fiber with High Alpha Cellulose Content.** G. A. Richter. Can. pats. 267,296 and 267,297, Jan. 4, 1927. *No. 267,296*—sulphite pulp is treated with a solution containing chlorine equal to 0.3 per cent to 1.5 per cent of the weight of the pulp to remove or render more reactive part of the lignin, and cooking the pulp in a lime cooking liquor to remove beta and gamma-celluloses and more lignin therefrom. *No. 267,269*—unbleached sulphite pulp is cooked with a suspension of lime, caustic soda solution is added, cooking is continued, the pulp is separated from the soluble reaction products and is bleached with a bleaching powder solution and superbleached with a chlorine solution.—A.P.-C.

**Production of High Alpha Cellulose Pulp.** Brown Co. Fr. pat. 621,412, Apr. 29, 1926. Unbleached sulphite pulp is boiled with a solution containing caustic soda, or soda ash, or both, at atmospheric or higher pressure, washed, and bleached. Before the alkaline treatment the stock can be advantageously treated with a small quantity of bleach, insufficient to bleach the pulp. Apparatus for carrying out the process continuously is described. —A.P.-C.

**The Amphoteric Properties of Cellulose.** E. O. Man. Papir-Jour. 15, No. 7, 91-6; No. 8, 107-110; No. 9, 116-120 (1927). Cellulose is amphoteric in that it reacts with both alkali and acid. The isoelectric point varies with the type of pulp, and can be shifted by treating with dilute reagents and then washing thoroughly with water. The removal of (H) + and (OH) — ions from dilute solutions is not due to adsorption because (1) all the acid or alkali can be readily washed out of the cellulose, and (2) when the amount acid added is plotted against the amount taken up by the cellulose, a curve is obtained that is not typical of adsorption phenomena. Trivalent elements will readily replace bi and mono valent elements in cellulose unless the concentrations of the latter are preponderant.—C.E.P.

**The Fluorescence of Wood Pulps and Vegetable Tannin Extracts.** O. Gerngross. Papierfabr. 25, 49-52 (Jan. 23, 1927). An experimental lecture demonstrating the effect of ultra-violet light on wood pulps and tannin extracts, both natural and synthetic. Waste sulphite liquor tanning preparations fluoresce violet in ultra-violet light. Cellulose, viscose silk, hydrocellulose, starch, etc., yield a violet fluorescence after immersion in spruce bark extract; nitrocellulose behaves negatively. Quebracho wood extract produces a yellow fluorescence on various kinds of cellulosic materials and nitro and acetylcellulose. The yellow color becomes less pronounced with the increase in nitrogen content of the nitro derivative. Disaccharides, such as lactose and sucrose, as well as decomposition products of proteins, do not absorb the violet or yellow fluorescent substances. Evidence is given that the fluorescent property is probably not due to sulphonic acids. Filter paper dipped in spruce bark extract fluoresces similar to unbleached sulphite pulp. The fluorescent compound is slightly soluble in hot water, resists organic solvents, is sensitive to alkalies and chlorine, but is not attacked by acids.—J.L.P.

**Process of Decreasing the Swelling of Synthetic Materials Hydrochloric Acid.** A. Classen. Eng. pat. 261,494. Papierfabr. 25, 64 (Jan. 23, 1927). Hydrochloric acid is allowed to act on cellulose at 20-50° C. in the presence of catalysts such as metallic oxides (tungsten, molybdenum, vanadium or uranium oxides).—J.L.P.

**The Saccharification of Wood Waste.** E. Haegglund. Papierfabr. 25, 52-60 (Jan. 23, 1927). An address covering the historical aspects of cellulose saccharification as well as a description of a commercial plant for the utilization of wood waste by the Goldschmidt process (Ger. pat. 391,969).—J.L.P.

**Process of Decreasing the Swelling by Synthetic Materials Made from Cellulose or Its Derivatives in Water by Means of Formaldehyde.** F. Hebler. Austrian pat. 105,353. Papierfabr. 25, 170 (Mar. 13, 1927). The cellulosic material is heated in the presence of formaldehyde to a temperature above 115° C.—J.L.P.

**Hemicelluloses.** E. Heuser. Papierfabr. 25, 238-243 (Apr. 17, 1927). The chemistry of the hemicelluloses is reviewed in an address. They are defined as being those constituents of the cell membrane which are more readily attacked than the cellulose. Hemicelluloses are easily dissolved by hot, dilute mineral acids and hydrolyzed; they are soluble in hot, dilute alkalies. Methods for the determination of hemi-celluloses are purely conventional and the results obtained are lacking in uniformity. Beta-cellulose obtained from sulphite pulp consists of 78.16 per cent cellulose, 13.68 per cent xylan, and 5.64 per cent mannan: thus, depolymerized cellulose appears as the chief constituent and the pentosan content is greater than the hexosan content. In gamma-cellulose these same constituents are present. Alkaline extracts from sulphite pulp form copperalkali compounds similar to cellulose. Such compounds, as for instance the xylan copper-alkali compound of the composition $(C_5H_8O_4)_2Cu(OH)_2.(NaOH)_2$, are bright blue in color, are soluble in ammonia, decompose on drying yielding a green coloration, and tend to depolymerize the polysaccharide. The copper hydroxide is assumed to decompose forming cuprous oxide and oxgygen, which latter oxidizes the cellulose of hemicellulose complex. The formation of such substances indicates a similarity between cellulose and hemicelluloses, which vary greatly depending upon the nature of the cellulosic material.—J.L.P.

**Effect of Partial Hydrolysis on the Alkali Solubility of Wood.** L. F. Hawley and W. G. Campbell. Ind. Eng. Chem. 19, 742-744 (June, 1927). Although the principal effect of decay on wood, so far as removal of constituents is concerned, is apparently the same as a hydrolysis, yet these two processes differ in their effect on the alkali-solubility of the residue. The total alkali-solubility of partly decayed wood is much greater than that of wood which has been hydrolyzed to the same extent (as shown by equal loss in weight). The solubility of the lignin in alkali is very slightly increased by partial hydrolysis, whereas decay may render the lignin 50 per cent soluble. The solubility of the residual cellulose is considerably increased by partial hydrolysis, but probably not to the same extent as it is by decay. There is in partially hydrolyzed wood a material, probably a degradation product of cellulose, which is not determined as cellulose, lignin or pentosans. This material is soluble in 1 per cent sodium hydroxide solution.—A.P.-C.

**Determination of the Copper Number.** C. G. Schwalbe. Papierfabr. 25, 157-160 (Mar. 13, 1927). The copper number determination of Schwalbe and its numerous modifications are discussed. In addition, the alkali boil test of Cross and Bevan and the boil off number test of Kauffmann for determining cellulosic degradation products are included. Seventeen references are given.—J.L.P.

### Miscellaneous

**Use of Lime in Water Softening and Water Purification.** Chas. P. Hoover. Ind. Eng. Chem. 19, 567-570 (May, 1927). The extensive use of lime in water softening has been held back by the limited results that could be obtained in reduction of hardness and because the softened water was not stable. Hardness is now further reduced by resorting to (1) the hot process, (2) excess lime treatment, (3) split treatment, (4) excess lime followed by carbonation, (5) the use of compounds of alumina and (6) substitution of zeolite for soda ash to remove non-carbonate hardness. Stabilization may now be accomplished by recarbonation. The advantages of the use of lime in water purification, its limitations, the progress that has been made in overcoming these limitations, and new practical applications are discussed. It is shown that lime softening is exceptionally well adapted to the treatment of a badly polluted hard water, because coagulation is improved; organic matter, color, objectionable gases and iron are removed; and bacteria are killed, making it unnecessary to depend on chlorine if tastes and odor are feared, and thereby making it sometimes possible to produce a satisfactory potable water from badly polluted water high in organic matter. It is a real adjunct to water purification because it increases the efficiency of sedimentation and filtration processes.—A.P.-C.

**Use of Non Rusting Steel in Paper Making.** H. W. Stel. Paper 29, 1315-1316 (Dec., 1926); Paper Tr. J. 84, No. 17, 47 (Apr. 28, 1927). "Nonoxy" steels, containing nickel and a very high percentage of chromium, possesses the twofold quality of being rust resistant and of standing up very well under the severe wear to which beater roll and bedplate knives are subjected, particularly in the manufacture of fine papers. Its merits for this purpose are briefly discussed.—A.P.-C.

**The Chemical and Physical Control of Non Ferrous Alloys in the Foundry.** B. Reed. Pulp and Paper. 25, 513-514 (Apr. 21, 1927). Brief discussion of the causes or porosity in non-ferrous (particularly of brass and other copper alloys) castings, and of the methods of overcoming them.—A.P.-C.

**Standard Iodine Solution.** Fred. C. Bond. Ind. Eng. Chem. 19, 607 (May, 1927). Standard iodine solution can be conveniently prepared from standard potassium permanganate by adding a given amount of the latter to potassium iodide solution and completing to the required volume. Sufficient excess of potassium iodide should be present to hold the iodine in solution; the amount necessary may be calculated by assuming that one potassium iodide molecule will hold up approximately two atoms of iodine.—A.P.-C.

**D, E, F, G, H, K, L,—United States Patents on Paper Making 1926.** Clarence J. West, Paper Tr. J. 84, No. 17, 56-58 (Apr. 28, 1927). A classified list of patents of interest to the paper industry issued at Washington in 1926.—A.P.-C.

**D, E, F, G, H, K, L,—U. S. Patents on Paper Making Issued during the First Three Months of 1927.** Clarence J. West. Paper Tr. J. 84, No. 19, 47-48 (May 12, 1927). A classified list of patents of interest to the paper industry issued at Washington during Jan. Feb. and Mar., 1927.—A.P.-C.

**D, E, F, G, H, K, Pulp and Paper Mfr. in N. A.** James d'A. Clark. World's Paper Tr. Rev. 86, 864-868, 922, 924 (Sept. 17); 954-958-998, 998, 1000 (Sept. 24); 1024-1032 (Oct. 1); 1110-1118 (Oct. 8); 1274-1278, 1316-1320 (Oct. 22); 1354-1358, 1396-1400 (Oct. 29); 1476-1484 (Nov. 5); 1556-1562 (Nov. 2); 1634-1642 (Nov. 19); 1718-1724 (Nov. 26); 1884-1890 (Dec. 10); 1964-1966 (Dec. 17); 2046-2052 (Dec. 24); 2098-2106 (Dec. 31, 1926); Pulp and Paper 24, 1223-1225 (Oct. 14); 1253-1255 (Oct. 21); 1479-1481 (Dec. 9); 1509-1511 (Dec. 16); 1555-1558 (Dec. 23); 1589-1592 (Dec. 30, 1926); 25, 7-10, 12 (Jan. 6); 37-42 (Jan. 13); 83-85 (Jan. 20); 119-120 (Jan. 27); 145 (Feb. 3); 169-170, 188 (Feb. 10); 213-215 (Feb. 17); 255-256 (Feb. 24); 283-285 (Mar. 3); 305-306, 326 (Mar. 10, 1927); Paper Tr. J. 83, No. 22, 43-45 (Nov. 25); No. 25, 45-49 (Dec. 16); No. 27, 39-40 (Dec. 30, 1926); 84, No. 1, 61-62 (Jan. 1); No. 10, 43-45 (Mar. 10, 1927). This is a series of articles in which, following an extensive tour and study of numerous N. A. pulp and paper mills, the author describes in detail the main points of American practice in the manufacture of mechanical, sulphite, soda (including Keebra) and sulphate pulps, as well as waste paper recovery, pulp bleaching and paper making. The enquiry has been performed with a view to obtaining data as to how far the introduction of the whole or parts of the above processes could be adapted with advantage to conditions in Great Britain.—A.P.-C.

**Paper Machine Efficiencies.** D. A. Wilcox. Paper Mill 50, No. 10, 20-26 (Mar. 5, 1927); Paper Tr. J. 84, No. 10, 53-56 (Mar. 10, 1927). An explanation of the system used at the Oxford Paper Co. to check up the operating efficiencies of the paper machines, with a discussion of the benefits which have been derived from its application.—A.P.-C.

**Working Up Waste Impregnated Roofing.** L. Kirschbraun. U. S. Pat. 1,606,427, Nov. 9, 1926). Scraps from impregnated roofing, etc., are heated in a heater to approximately the melting point of the impregnating medium, pulped or beaten to separate the fibers, and the bituminous material is precipitated on the separated fibers to render the material non-sticky. The stock thus prepared is felted on a paper machine as usual.—A.P.-C.

**Paper Making in Indochina.** M. Birot. Mon. Papeterie Francaise 58, 14-16 (Jan. 1), 38-40 (Jan. 15), 61-63 (Feb. 1), 81-83

(Feb. 15, 1927). Outline of the establishment of machine made paper mills in Indochina, with a description of the raw materials used, of the equipment of and process used by the mills operating at the present time, and of the primitive methods used for the manufacture of hand-made paper by the natives. Notes are also given on the paper industry and trade of China.—A.P.-C.

**Reports of the Committee on Waste.** G. D. Bearde and W. G. MacNaughton. Paper Tr. J. 84, No. 11, 45-46 (Mar. 17, 1927). Brief survey of the activity of the U. S. paper and board industry and of the Canadian news print industry in the installation and use of stock-saving equipment, with a brief discussion of the benefits derived by the industry reduction in manufacturing costs as a result of strong agitation against stream pollution by pulp and paper mill effluents.—A.P.-C.

**Practical Help and Scientific Sympathy.** T. W. Lund. Paper Maker and Brit. Paper Tr. J. 73, 249-255, 248D (Mar. 1, 1927); World's Paper Tr. Rev. 87, 674-678 (Mar. 4, 1927). A discussion of the function of the chemist in the paper industry with suggestions as to a number of topics which could profitably be discussed at the meetings of the Technical Section of the Paper Makers' Assn. of Great Britain.—A.P.-C.

**The Paper Business in Canada. An Industrial Romance.** Allen A. Lowe. Paper Ind. 8, 2176f-2176h (Mar., 1927). Review of the growth of the Canadian paper industry in the course of the last century and a quarter.—A.P.-C.

**"Go-Devil" Cleans Pipe Line.** Anon. Paper Mill 50, No. 17, 40 (Apr. 23, 1927). This device consists of a heavy cast iron bronze cylinder equipped with a series of hardened steel scrapers. It is used to clean the four-mile slush pulp line between the Wisconsin Rapids and Biron mills of the Consolidated Water Power and Paper Company by removing accumulations of slime. The liquid in the pipe line, which is under a pressure of 75 pounds per square inch, imparts a rapid rotary motion to the blades and also gives the device a forward motion at a speed of 200 feet per minute.—A.P.-C.

**X-Rays and Their Application to Industry.** G. L. Clark. Paper Tr. J. 84, No. 16, 47-60 (Apr. 21, 1927). An address presenting the possibilities of X-rays in the future, based upon some typical facts as we know them.—A.P.-C.

**Norway's First Paper Mill.** P. R. Sollied. Papir-Jour. 14, 254-6, 264-8, 294-8. Historical.—C.E.P.

**What Is Good Paper?** C. N. Candee. Pulp and Paper 25, 437-438 (Apr. 7, 1927). The quality of paper is dependent on the purpose for which it is to be used, a given sample may be quite unsuitable (and therefore of poor quality) for one purpose and eminently satisfactory for another. Matching of paper is worked out largely from the results of microscopical examination of the unknown sample. The effects of moisture on paper are briefly described.—A.P.-C.

**Paper Making in the South Seas.** Dard Hunter. Pulp and Paper 25, 580 (May 5, 1927). Brief description of the making of "tapa" (meaning "beaten," the native word for paper in the South Sea Islands).—A.P.-C.

**Unusual Uses for Sheet Iron as Applied in the Champion Coated Paper Co.** Anon. Paper Ind. 9, 255-256 (May 1927). Outline of a few of the many unusual uses to which sheet iron is being put by the Champion Coated Paper Co.—A.P.-C.

**Paper Liners in Tin Cans.** C. L. Mantell. Paper Ind. 9, 59-60 (Apr., 1927). Lining of tin cans used for packing food products, particularly marine products such as lobster, clams, fish, etc., with parchment has completely eliminated blackening of the cans by the sulphur compounds in these products. The paper is cut in circles to fit the bottom and top of the can; the sides are protected by a sheet of paper rolled into a loose cylinder, no attempt being made to hold the cylinder together and the paper fitting loosely in the can.—A.P.-C.

**Electrical Measurements in the Paper Industry.** A. L. Beedle. Paper Mill 50, No. 20, 24-28 (May 14, 1927). A discussion of the importance of electrical measurements (voltage, current, power) to determine the efficiency of electric motors and the machinery which they drive, and thus reduce unnecessary power losses.—A.P.-C.

**Centrifugal Pumps in the Paper Industry.** J. M. Wikel. Paper Mill 50, No. 20, 20, 22, 28 (May 14, 1927). Brief discussion of the factors affecting the efficiency of centrifugal pumps.—A.P.-C.

**Steam Consumption in Drying Paper.** Torsten Samson. Svensk Pappers Tidning. 28, No. 19, 504-7 (1926). A discussion of the theoretical and actual distribution of heat in the drying of paper on steam cylinders.—C.E.P.

**Electrical Section Drives on Paper Machines.** Ragnar Liljeblad. Svensk Pappers Tidning 28, No. 19, 507-8; No. 20, 538-40; No. 21, 573-6 (1926). A discussion of the advantages of electrical section drives over transmission drives, with description, diagrams, and photographs of installations.—C.E.P.

# Witham's New Beater

George S. Witham, Jr., has recently given up his position in a paper mill to devote the whole of his time to the marketing of various papermaking devices which he has developed. Amongst these is a new type of beater, for which he was granted United States patent No. 1,639,917 (Aug. 23, 1927).

This beater is characterized by three main features:

(1) The motor is connected directly to the beater roll, and the parts are connected in such a manner that the roll and motor may be adjusted together toward and from the bedplate without disturbing the connection between them.

(2) The doctor blade is so mounted, with respect to the roll, that unbroken stock passing between the roll and the bedplate is cut off clean and is deflected outwards from the roll.

(3) The fly bars are constructed in one piece with the body of the roll, and of such material that the roll can be made lighter than usual without sacrificing its strength; this allows the roll to be driven at a higher speed, and the bars are shaped so as to speed up the circulation of the stock.

Fig. 1 is a plan view of the improved beater, with the hood removed;

Fig. 2 is an end view;

Figs. 3 and 5 are sections on the lines 3-3 and 5-5, respectively, of Figure 1;

Fig. 4 is a front elevation.

The beater tub (1) is of usual construction, having the midfeather (2), and the beater roll (3) is arranged at one side of the midfeather, being secured on the shaft (4), which is supported at its end by pairs of bearing brackets or pillars (5). The latter are placed outside the tub, and the shaft is journaled in bearing bars (6) and (6a), which are arranged between the members of their respective pairs, and are adjustable vertically. The motor (7) for driving the roll is connected directly to the shaft (4) by means of a coupling (8). The motor is mounted on the bearing bar (6), which is a substantially triangular plate, having its base arranged between the bearing brackets (5), and having its apex adjacent to the adjacent side of the beater tub. At its apex the bearing bar carries a bearing (9) in which the shaft (4) is journaled, and the coupling (8) is between the bearing (9) and the motor. The coupling is of the usual construction, consisting of similar disks which are connected by pins adapted to shear under excess strain.

At the point where the shaft (4) passes through the side of the tub to the motor, a packing gland is provided of rubber or like flexible material, and so arranged that it does not interfere with the vertical movement of the shaft. Bearing (9) is a thrust bearing.

The bearing bar (6a) is mounted to move vertically between its bearing brackets or pillars in the same manner as the bar (6). The pillars (5) are hollow, and each of the bearing bars is provided at each pillar with a nut (10) arranged to move within the pillar. Each nut is engaged by a threaded shaft (11) journaled in the pillar, all of the shafts being similar, so that when they are rotated at the same speed the bearing bars will be moved together. Each shaft is provided at its upper end with a bevel gear (12), and the gears (12) of each pair of pillars are rotated by a cross shaft (13) each shaft (13) being provided with bevel gears (14) and meshing with the gears (12). The shafts (13) are journaled in bearings (15), supported by the pillars, and means are provided for simultaneously rotating the four shafts. These means consist of a shaft (16), which is journaled across the beater tub, parallel to the beater roll shaft (4), the shaft (16) being supported by bearings (17) on the pillars. It is journaled below the shaft (16). It is obvious that when the shaft (16) is rotated them, by worm gear connections, each connection comprising a worm (18) on the shaft (16) and a worm wheel (19) on the adjacent shaft (13). A hand wheel (20) is provided for rotating the shaft (16). It is obvious that when the shaft 16 is rotated

Fig. 1,

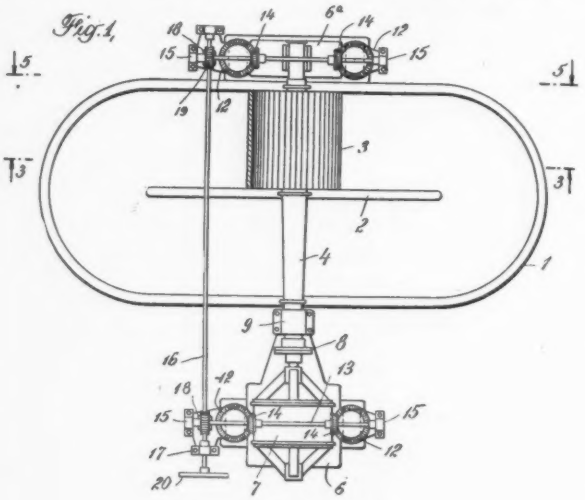
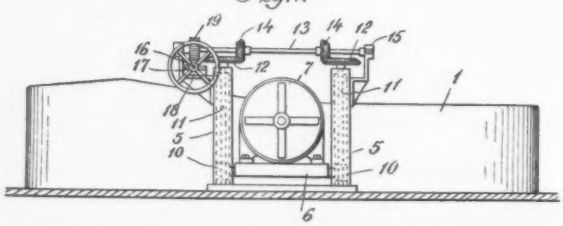


Fig. 2



the shafts (13) will be simultaneously rotated in the same direction, and the screw threaded shaft (1) will be turned to raise or lower the bearing bars (6) and (6a).

In the usual construction the doctor blade is arranged at an angle of about 45 degrees to the horizontal, and it touches the beater roll at an angle such that unbroken stock passing through between the roll and bedplate may force the blade upwards and push the curbing out of place. In the present construction the doctor blade (21) is suspended at such a point that, when the free edge of the blade touches the beater roll, the blade is practically vertical. The hinge (22) is in a plane which is tangential to the roll. In addition, the blade is so arranged that its free edge engages the roll below the center and between the backfall and the roll.

The mechanism for adjusting the free edge of the blade towards and from the roll is in the form of screw rods (24), hinged at one end to the blade, and passing through fixed angle brackets

Fig. 3,

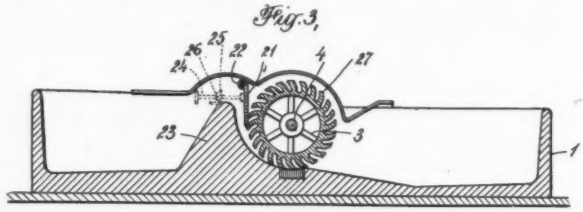


Fig. 4,

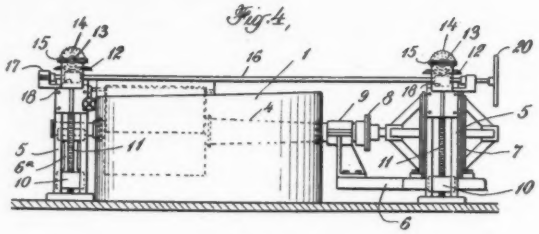
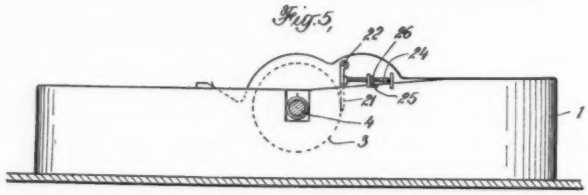


Fig. 5,



(25) near the other end. The rod is engaged by a nut (26) on the opposite side of the bracket from the blade. One such rod is provided at each end of the blade.

With this arrangement the blade cuts the stock clean from the roll, and there is no possibility of unbroken stock pushing the plate out of place. With the blade arranged as described, it is possible to increase the height of the backfall and to make a larger chamber in the rear thereof.

The construction of the beater roll is best shown in Figure 3. The roll is made in one piece, preferably of manganese steel, and it is provided with blades or fly bars (27) of substantially uniform thickness and curved in a direction opposite to the direction of rotation of the beater roll. The curved shape of the blades assists in cutting the stock and in propelling it. Because of its integral construction and the strength of the material used, the roll may be made smaller than with the usual construction, and it may be driven at a higher speed. The blades act on the stock somewhat in the same manner as a centrifugal pump, increasing the velocity of the circulation, which is also increased by the high speed of the roll.

The use of a beater roll of a diameter smaller than is customary allows of a greater number of revolutions per minute, and thereby makes possible the use of a high-speed electric motor, the cost of which is less than that of a low-speed motor. In addition, there is complete elimination of line shafting, etc., with much economy in power. When a group of beaters are being driven by belts from line shafting in conformity with present day practice, the clogging or breaking of one beater may necessitate the shutting down of the whole line of beaters, but with the present construction each beater is a separate unit, and its motor switch can be opened without in any way interfering with other beaters. The arrangement also makes possible a direct power reading on each beater, where that is desirable, and also reduces friction loss, belt maintenance, lubrication cost, etc.—A. P.-C.

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# Fundamentals of Management Save Money in the Boiler Room*

By H. L. Griffin, Industrial Engineer

Up to ten years ago, boiler room economy and efficiency in the industrial plant had been given very little thought or consideration. Unlike the central station steam plants, which had enviable records of accomplishment, the steam plants of the manufacturing industries stood out as glaring examples of poor management and utter disregard for savings in fuel. With present figures before us as to pounds of steam generated per pound of coal used, it is nothing short of shocking and appears almost incredible that boiler rooms should have been operated on such loose principles as did exist.

### War Conditions Bring Improvements

Then came the World War and with it the increasing price of coal and the mutual necessity for conservation in all lines. The government made an investigation of power plants in the United States which disclosed the fact that coal was being shamefully wasted and reasonable efficiencies were not even being approached. To remedy this situation each power plant was allowed a certain amount of coal each month based on what was thought to be sufficient to meet the individual requirements if used efficiently. This meant that plants which had formerly operated without regard to efficiency must make such changes as were necessary to operate in accord with their allotment.

As a result, factory power plants were carefully gone over and put in first-class operating condition, new equipment was purchased, the firemen became more capable as their knowledge of combustion and operating principles became greater. Competent engineering ability was obtained for establishing standards of operation toward which the firemen could work. The firemen were instructed by these experts how it was possible to obtain these high standards of efficiency; instruments were installed so that the firemen could readily see if their performance at any moment was such that the final results required would be assured. Incentives were offered to make it worth while for the firemen to put forth extra effort to meet the high standards. Working conditions were improved, the surroundings were made as pleasant as possible, and gradually the steam generating end of the industrial plant became somewhere near as efficient as the production end itself.

After the war, however, conditions gradually changed. Some plants drifted back into the old ways while others forged ahead until some of them now compare favorably with central stations in matters of efficiency.

But extremes in either direction are bound to result in loss. Loosely managed and under-equipped plants mean a loss in the use of coal while over-managed and over-equipped plants meet with the law of diminishing returns. The trouble lies, to a large extent, in the lack of understanding among managers of the general fundamental laws of boiler-room management and the lack of a correct method for comparing the cost of equipment invested and general expense against returns.

### Eleven Major Principles

In order to attack boiler-room problems with intelligence and systematic procedure, the following general principles of boiler-room management are suggested:—

1—Put all present equipment in first-class operating condition.

2—Keep all equipment in first-class condition by establishing a system of regular periodical inspection.

3—Determine the maximum efficiency that can be obtained with the existing equipment and establish standards of operation based on the maximum possible efficiency under regular operating conditions.

4—Investigate the possibility of adding additional equipment or means for increasing the present efficiency, using greater efficiency and better economy as the determining factors.

5—Select the kind of coal most suitable for the equipment in service, using greater efficiency and better economy as the determining factors.

6—Select the proper boiler-room personnel, carefully taking into consideration the physical and mental make-up.

7—See that each individual in the boiler room has a clear conception as to his duties, what he is expected to accomplish and teach him how the expected results can be obtained.

8—Provide the necessary instruments so that the firemen will know at all times whether they are satisfactorily performing their duties so that the final results will be assured.

9—Provide the proper incentive in the form of extra pay or bonus for each individual in the boiler room who maintains the maximum standards of efficiency.

10—Provide some simple means for checking the efficiency and operation of the firemen.

11—Keep only such records as will point to better means of obtaining efficiency and economy and aid in checking operation against desired standards.

* From Manufacturing Industries.

Some of the principles laid down are so obviously apparent that the natural inclination at first is to think them unworthy of mention; however, an investigation of present boiler-room practice in most industrial power plants will make it self-evident that if these principles are well known, then they certainly are not being applied. The writer has found from his experience that where these principles are used a well-balanced condition exists both in regard to efficiency and economy.

### Discussion of Principles

To obtain a clearer understanding of these principles, we will discuss them more in detail.

*1—Put all present equipment in first-class operating condition.*

A few dollars spent wisely in putting each piece of equipment in the very best possible working condition will mean a surprisingly large saving in the amount of fuel burned and will also have a beneficial effect on the mental attitude of the firemen. Leaks in the settings, burned-out grates, burned-out baffles, leaky and loose dampers, poorly insulated pipes, leaky traps and valves, worn-out parts, etc., are only a few of the many things that will be brought to light by careful inspection and investigation. At the same time it is well to make all necessary repairs to the building housing the equipment. A few dollars spent in cleaning and painting will do much to improve the conditions and will have a very beneficial psychological effect on the fireman.

*2—Keep the equipment in first-class condition by establishing a system of regular periodical inspection.*

If all the equipment and the building, itself have been put in first-class condition, the management will do well to see that such conditions are maintained. This will require that some periodical method of inspection be used, and it further requires that the responsibility for these inspections be made the duty of some one individual or department. With this system in force, all minor repairs will be taken care of as soon as noted and will save a great deal of money that would otherwise be spent if the matter had been put off until replacements were necessary. This method will also eliminate all possibilities of a shutdown due to extensive repair work and will insure the efficient operation of the equipment at all times.

*3—Determine the maximum efficiency that can be obtained and establish standards of operation.*

Unless the manager has the good fortune of having a capable power-plant engineer in his employ, it is possibly good policy at this point to engage the services of a consulting engineer, who specializes in this line of work. In either case the engineer should make an analysis of the existing equipment and establish standards of maximum operating efficiencies. With these standards established the manager clearly knows just what he can expect in the way of efficiency from the equipment he has in use and has a tangible basis with which to compare the operating efficiencies of his firemen.

### Adding New Equipment

*4—Investigate the possibility of adding equipment or means for increasing the present efficiency.*

After the standard attainment has been determined, it is likely that the engineer finds that these figures are lower than those found in ordinary practice, or lower than he might naturally expect. At this point it is well to have the engineer look into the possibility of adding such equipment as may be necessary to increase the efficiency of the plant, but not at a sacrifice of economy. A plant with high efficiency may be operating very economically as regards costs. The investment, depreciation, repairs, etc., of a new piece of equipment should be given very serious thought and weighed against the expected increase in efficiency. Every piece of proposed new equipment should sell itself and should make a profit on the investment or it should not be installed. There are a few exceptions to this case, but it is usually well to follow this rule. Some companies require that each piece of equipment installed must pay for itself in two years, others in three years and still others in four years, while others simply install it on the recommendation of the engineer that it will increase the efficiency of the plant and give little thought to the matter from a standpoint of investment.

*5—Select the kind of coal most suitable for the equipment used.*

With every boiler installation there is a best kind of coal to use, depending upon the location, freight rates and service, the kind of furnace and grates, type of boilers, diameter and height of stack, analysis and price of the coal, etc. All these factors should be given careful consideration and the coal selected should be one that will give the greatest efficiency and the largest steam generation for each dollar spent. There are a few cases where this rule may have to be modified, such as where delivery service is poor and shutdown of the plant might result. However, the rule as stated above should be approached as nearly as possible, if the best results are to be secured.

*6—Select the proper boiler-room personnel.*

This is a very important and difficult task. Men should be selected who are physically able to carry on their work and maintain the standard efficiencies without in any way affecting their health. They should possess a degree of mentality sufficient to grasp the fundamental principles of combustion and good boiler-room practice and should be of the type who are willing to learn and follow instructions. It would be well to select men who have the reputation of being steady and frugal. Any extra money or bonus to be earned will appeal to them strongly and they will be more inclined to maintain the high efficiencies required.

*7—See that each individual in the boiler room has a clear conception as to his duties.*

Many cases are found today in which the boiler room, with first-class equipment, is turned over to the firemen, who are left to their own resources. Most firemen have a very hazy knowledge of combustion principles and simply shovel the coal required to keep the steam pressure where it belongs, without any regard for efficiency. It is absolutely essential that the firemen have a clear conception as to their duties, just what they are expected to accomplish, and then, above all things, they must be taught how the expected results may be obtained. This may take a considerable length of time and a great deal of patience, but the effort expended will be well repaid.

### Value of Power Plant Instruments

*8—Provide the necessary power plant instruments.*

Obviously, a fireman cannot be held responsible for getting the best results if he is not given some means of knowing at all times whether he is correctly performing his duties. Boiler-room instruments are a cheap investment, based on the indirect savings made possible by their use.

*9—Provide the proper incentive for maintaining the maximum efficiency.*

If a fireman is given the difficult task of maintaining the maximum standard efficiencies as outlined above without any incentive for making the extra effort there is little doubt but that he will shirk as much as possible and obtain employment elsewhere at the first opportunity presented. However, if he is assured of additional earnings by hard work and diligent application, it is probable that he will bend every effort to do what is required. A few dollars spent as a reward for honest effort is well repaid in the savings in fuel.

*10—Provide some simple means for checking the efficiency of operation.*

The type and kind of equipment necessary for this purpose will vary according to the size and demands of the plant. In all cases, however, means should be provided for weighing the coal and the water evaporated or the steam generated and an analysis of the coal used should be obtained. In the small plant the water evaporated per pound of coal should be determined and this figure with the analysis of the coal known should serve as a check against the standard performance to see if the fire-

man has earned his bonus or extra pay. In the larger plants more elaborate equipment can be used.

**Keeping Records**

*11—Keep only such records as will aid in maintaining efficiency.*

Records of accomplishment are valuable only as they serve to point out means for more efficient operation and better economy and aid in checking actual operations against standards. Systematizing can be very easily overdone. Only such power-plant records as will intelligently present necessary facts should be kept.

The writer can mention a dozen or more factory power plants in which the above principles have been employed, and the methods by which they were applied. In every case the results obtained were exceptionally satisfactory. In under-managed and under-equipped plants, greater efficiencies and economies were realized, in over-systematized and over-equipped plants the efficiencies in some cases could not be bettered, but greater economies were attained by substituting simpler methods for those in use.

Central station practice has been developed to the limit, but there is yet a great deal of room for improvement in the industrial plant. The man who can reorganize along modern lines, applying the most efficient appliances and practices, is sure to harvest a rich reward for his endeavors.

# Installing Standard Costs*

## To Increase Efficiency and Cut Down Costs

By G. Charter Harrison [1]

Over sixty years ago the British philosopher Herbert Spencer made the prophesy that the time was fast approaching when science would be necessary to everyone, and to insure that his meaning would be clearly understood, he defined what he meant by the word science by saying that "it is the business of science to predict."

Today we are realizing the truth of Herbert Spencer's dictum—there never was a time in industrial history, when it was of such supreme importance for the business man to look ahead as it is today. With high-speed business there is no time to make leisurely adjustments—as Henry Ford is finding out today. Sixty years ago a situation like that which developed with the Goodyear Tire & Rubber Company in 1920, when the previous year's surplus of over $33,000,000 was turned into a deficit of nearly $16,000,000, or more recently when the late Ogden Armour, at the peak of his reverses, lost $1,000,000 a *day for 130 days in succession—would have been inconceivable.*

**Speed Dominates Modern Life**

Speed is the dominant characteristic of our modern life, but to secure speed with safety, we must combine it with the faculty of making quick adjustments. It was the increased speed of automobiles that created the demand for four-wheel brakes; in the days of the buggy there was no need for road signs warning of turns and curves and crossroads, but with a fast automobile these things are as essential as the block system in the path of the Twentieth Century Limited. Clear vision and a steady head are not sufficient to enable the motorist to avoid disaster; these must be supplemented by proper control mechanism. In the same way the modern executive requires the proper business control mechanism to enable him to hold his own in the industrial race and this mechanism is the budget with which this series of articles deal.

Scientific management in the factory is not enough—the business concern which wishes to hold its own in the coming era of competition, which in the main will be competition in efficiency—will be compelled to apply the principles of scientific management in all its divisions. It has been scientific management in the factory which has produced this condition. It is largely due to the improvement in production methods that, in America, we have increased our producing facilities entirely out of proportion to the capacity of the market to absorb. As a recent writer on financial subjects stated, "we are in a buyer's *market. This fact cannot be disputed. In practically evrey line* America has productive capacity in excess of current demand."

I have endeavored to show in these articles that the one coordinating influence in the application of the scientific management idea in a business is the budget.

One of the first to appreciate the value of the budget is the banker. I know of one banking house which will not undertake the financing of any business that does not furnish it with complete detailed forecasts of profit and loss annually and with information monthly showing to what extent actual performance varies from the budget.

To really appreciate the far-reaching influence of a budget, it is necessary to have had practical experience in a business operating a budget. It has been my pleasure to have been intimately associated with the introduction of budgets on a number of occasions and I speak from experience when I state that I know of no single step which even approaches the value of a properly worked out budget in increasing the profits of a business.

**Budget Effectiveness in Dry Battery Plant**

I call to mind a recent case when I was called upon to supervise the introduction of a budget plan and to direct the sales of a concern manufacturing a varied line of dry batteries. A careful market analysis had disclosed the possibility of a very considerable sales increase, particularly in certain neglected territories, and the budget which was drawn up on the basis of a 50 per cent sales increase, as was to be expected, demonstrated the possibility of a very large increase in net profits. Every branch manager was thoroughly sold upon the fact that *the realization of his particular sales quota and expense allow*ance was perfectly feasible and was furnished daily with sales figures showing how his sales by lines of products and by states for the day previous and for the year to date compared with the budget. Further, at the close of the month he was furnished with complete information showing a comparison of the actual profits realized by his branch with the forecasted profits and given an analysis of the reasons for any variances. Similar information was furnished the factory superintendent regarding factory operations. He received daily a labor efficiency report showing how his actual labor costs (both direct and indirect) for the day previous compared with the standard labor costs which were incorporated in the budget. And at the close of the month he received most complete information as to all factory costs in relation to standards, with an accompanying analysis of the causes underlying variations.

**Sales and Profits Ahead of Budget**

*In spite of the very large increase in sales which the sales* force was called upon to obtain, the sales actually ran considerably ahead of the budget and the net profits exceeded those called for by the budget, being far in excess of the profits of any previous year. It is true that the sales of the industry in question were on the upgrade owing to the increasing demand for radio batteries, but the increase in sales of the concern in question was three times as great as for the industry as a whole.

*From "Manufacturing Industries."
[1]Partner, Stevenson, Harrison and Jordan.

### Contributing Factors

A number of factors contributed to the satisfactory showing of the business referred to, but, without question, the primary reason for the success of the company was the fact that a definite realizable objective was set for every responsible member of the organization, and under the budget plan the interest of every such member was kept at a high pitch by his being constantly advised as to his standing in relation to that objective. The budget introduced a new factor into that business; it added a new interest; it brought sporting instincts into play. The men who were working under the budget lived it day and night and there was no man who went through that year of accomplishment who was not a better, stronger, and more effective business man at the close of that year than he was at the start.

### Budget Idea Must Be Accepted

Now, in spite of what has been said above, a budget is not a cure-all and when improperly applied a budget may do more harm than good. For a budget to be effective, it is of vital importance that those who are going to be called upon to live up to it be entirely sold upon the possibility of so doing. I have seen optimistic budgets introduced by presidents of companies, which called for large increases in sales, which increases were impossible of accomplishment unless important changes were made in methods and policies, and unless advertising appropriations were substantially increased, none of which steps was for a moment contemplated. This particular kind of so-called budget is a detriment rather than a help—it disgusts, amuses, or discourages the individuals expected to live up to it, depending upon their respective temperaments. A budget is of little use unless it can be shown that the goal which has been set up, though possibly a hard one, is nevertheless not an impossible one—that it has been decided upon only after full and careful consideration of all the facts. Let us give an illustration of this point.

### Importance of Right Approach

If a general sales manager for a company manufacturing threshing machines should go to the manager of the Kansas City branch for instance, and say "Jim, your sales quota for the coming year is going to be 50 per cent higher than your sales were last year," it is likely that Jim, without any information regarding the basis on which this sales quota was figured, would regard the proposition as being either foolish or unreasonable, or both. But if the sales manager were able to say that the sales of the Kansas City branch during the past year represented only one-half the amount, per bushel of threshable grain produced in the Kansas City territory, that the sales of the other branches were, per bushel of threshable grain produced in the other territories, Jim would very quickly perceive that the request made of him was entirely reasonable, and if he were any kind of a man at all, would break his neck in the attempt to prove that he was at least as capable as the managers of the other branches. And that is how it works out in practice.

### Budget Check-Up

Another unsatisfactory and ineffective way of figuring a budget is the percentage method where on the basis of past results certain percentages are set up—so much per cent of sales for manufacturing cost—so much for branch expenses, etc. To obtain the best results from a budget it is essential that expense allowances be detailed—in the case of a branch sales office, for instance, so much for salesmen's salaries, so much for salesmen's travelling expenses, so much for office rent, for trade shows, for entertainment. And these expense allowances should be figured by months so that the comptroller can advise the branch manager each month exactly in what item of expense he has exceeded his allowance. Furthermore, if a branch manager exceeds his allowance in one month he should clearly understand that he will be expected to keep his expenses to that extent below the budget for the month following, because once exceptions are allowed in connection with a budget it soon loses potency.

A budget may be a farce or it may be the greatest factor toward the successful operation of a business. It all depends upon the method of introducing it.

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## Waivers of Assessments for 1919-1922

Further information regarding waivers of assessment for the years 1919-1922 executed in October, 1926.

The facts assumed here for purposes of illustration are as follows:

Returns for the years 1919-1922 were filed on the regular due date, with the exception of 1920, for which year an amended return was filed in 1921. After February, 1926, the taxpayer signed waivers of assessment (not collection) for all the year's in question, extending the period for additional assessments for these years to December 31, 1927. Assessment for each of the years is made in 1927, within the agreed period. Can collection of the tax for each of the above years be now made, or has the Statute of Limitation run against collection for any or all of these years?

Section 277 (a) (3) of the 1926 Act provides that the amount of taxes imposed by the Act of 1918 shall be assessed within five years after the return was filed and no *proceedings* and this includes distraint, in court without assessment for the *collection* of such taxes shall be begun after the expiration of such period. Section 277 (a) (3) contains the same provision for the taxes imposed by the 1921 Act, except that the period is reduced to four years after the filing of the return.

In Section 278 (e) it provides that this section of the Act shall not authorize the assessment of a tax *or the collection thereof by distraint or by a proceeding* in the court if at the time of the enactment of this Act (February 26, 1926) such *assessment, distraint,* or *proceedings,* was barred by the statutory period of limitation properly applicable thereto, unless prior to the *enactment of this Act* (February 26, 1926) the Commission and taxpayer agreed in writing thereto.

It appears that at the date of the passage of the 1926 Act (February 26, 1926) both assessment and collection for the year 1919 had expired on or about March 15, 1925. Apparently, there was no written agreement between the Commissioner and taxpayer executed *prior to the 1926 Act* (February 26, 1926), such as contemplated in section 278 (e) and the agreement executed subsequent to that date, even if sufficient under the law to extend the period of assessment, is clearly insufficient to extend the period for collection. It follows therefore, that a collection of taxes for 1919, could not have been successfully enforced for that year. (See Reliance Mfg. Co., v. Comm., Dec. 2593 C. C. H., at paragraph 8817, Unabridged, Vol. III).

With reference to the years 1920-1921 and 1922 the time for both assessment and collection of taxes for these years was not outlawed at the passage of the 1926 Act, and in accordance with Section 278 (c) the assessment waivers authorized therein were properly executed we assume after enactment date of the 1926 Act, extending the time for the assessment to December 31, 1927. So far as the years 1920, 1921 and 1922 are concerned, therefore, no question can arise as to the right of the government to collect these taxes at any time within six years after any assessment (made up to December 31, 1927), under Section 278 (d) of the 1926 Act, since it is provided therein that where an assessment is made either before or after the enactment of 1926 Act (apparently if made within apt time as per a valid waiver) such tax may be collected within six years from assessment date, or prior to the expiration of any period of collection agreed on by taxpayer and Commissioner.—*Commerce Clearing House Bulletin.*

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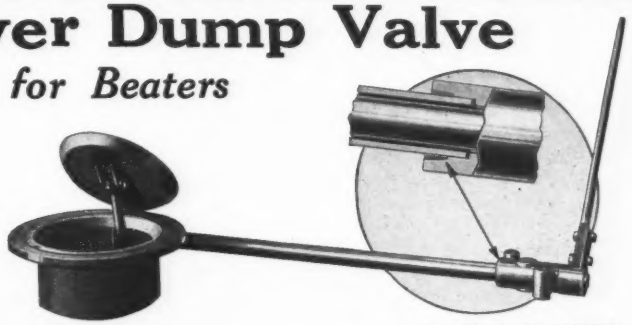

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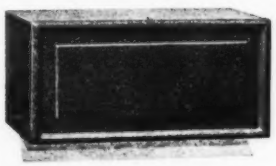

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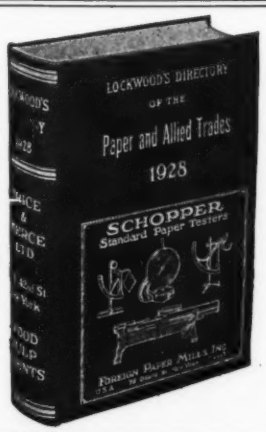


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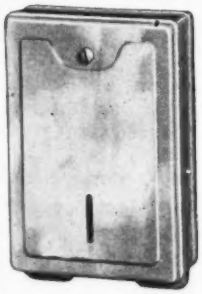

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# Obituary

### Walter S. Hodges

KALAMAZOO, Mich., December 23, 1927.—Walter S. Hodges, 73, former paper mill magnate and widely and favorably known in the Kalamazoo river valley district, died at 8:30 Sunday morning December 18 at the home of Judge and Mrs. Lynn B. Mason, 419 West Cedar street. He was a victim of heart disease, the end coming as a surprise to everyone. He was visiting Judge and Mrs. Mason and got up Sunday morning, apparently in the best of health and spirits. He went out doors and shoveled off the walk. When he came in he complained of being cold and sat down to get warm. Without a struggle he died.

He was born in Galesburg and was the son of Captain George Hodges, well known Civil War veteran. He married Nettie Carmer and for several years was in the employ of the American Express Company. He then went to the Kalamazoo Paper Company, with the late S. A. Gibson. In 1887 he entered the employ of the Bardeen Paper Company, Otsego, and after twelve years returned to Kalamazoo to organize the Superior Paper Company. He continued as president and general manager of that concern until it was absorbed by the Bryant Paper Company. He also played an important part in the re-organization of the Watervleit Paper Company. He retired many years ago.

One son, Carmer Hodges, was forced to go to Santa Barbara, Cal., about fifteen years ago for his health. About a year or two ago, Mr. and Mrs. Hodges moved there. Mrs. Hodges is there now and unable to come East. In addition there are two grandchildren surviving, Carmer Jr. and Jean. The funeral was held at 10 Tuesday morning in Goodale's chapel, West Main street. Burial was at Riverside cemetery.

### William Foley

OLD TOWN, Maine, December 27, 1927.—William Foley, one of the most widely known and recognized experts on the ground wood pulp industry of this country and Canada, died at his home, 31 High street, December 13, after a few days' illness, having been taken ill no longer ago than Friday.

William Foley was born in St. Catharine's, Ont., Canada, about 64 years ago and early entered into the ground wood pulp making industry, steadily advancing until he was a recognized authority on this method of pulp manufacture and had held important positions in various manufacturing plants throughout Canada and the eastern half of the United States. His earliest training was as a paper maker in the Rirdan Paper Company mills in Merritton, Ont., following which he entered the employ of James Davy in Thorold, also in the province of Ontario.

He came to Maine to enter the service of the Hollingsworth & Whitney Company in Winslow. He left there and was associated with the Webster, Ring Company., in Orono, traveled for a time as groundwood expert for the International Paper company. and while the local plant was under construction by the Welsters, who had sold out to the I. P. Company in Orono, came to the Nekonegan Paper Company mill in 1900, remaining with it until his death. It was while he was working in the middle west that he married Mrs. Foley in Cleveland, Ohio.

During Mr. Foley's residence here of 27 years, he has earned and won the highest regard of all classes of citizens for the uprightness of his life and the friendliness of his character. He was one of the original stockholders of the Old Town Trust Company and was later made a director which position he held until the bank was absorbed by the Merrill Trust Company a few months since.

### George Mason La Monte

George Mason La Monte, paper manufacturer, chairman of the board of the Prudential Insurance Company, and candidate for the United States Senate from New Jersey in 1918, died unexpectedly at the Hotel Weylin, 40 East Fifty-fourth street last Saturday. He had suffered several years with heart disease.

Mr. La Monte, who was a cousin of Thomas W. Lamont, of the Morgan banking firm, was long a leading figure in the Democratic party of New Jersey. Residing in Bound Brook more than fifty years, he first held office when he went to Trenton as an Assemblyman from Somerset County in 1911. He served only one term, and was appointed Commissioner of Banking and Insurance, later serving as vice-chairman of the Federal Reserve Bank of Philadelphia.

When the Democrats nominated Woodrow Wilson at Baltimore in 1912 Mr. La Monte was on hand as a delegate and a firm supporter of the New Jersey Governor. He was a Democratic elector from New Jersey in 1912, and six years later Mr. La Monte was the party nominee to oppose Governor Walter Edge for the United States Senate. After his defeat Mr. La Monte did not again actively concern himself with politics.

He was president of George La Monte & Son, manufacturers of safety paper, which was established by his father in 1893.

Mr. La Monte was one of the leading philanthropists of Bound Brook. He was president of the First National Bank there, and donated a park to the city, an athletic field to the public school, and was one of the chief contributors to a library recently erected. He was president of the New Jersey State Library Association.

Born in Danville, Va., in 1863, the son of George and Rebecca T. (Kern) La Monte, he attended Columbia College one year, and was graduated from Wesleyan University in 1884.

### Anna K. McDowell

PHILADELPHIA, Pa., December 26, 1927.—In the passing of Miss Anna K. McDowell, daughter of Francis W. McDowell, former secretary and general manager of the Jessup and Moore Paper Company, of Wilmington, Del., Philadelphia suffers the loss of one of its most beloved personalities long linked with charitable work in the city. Miss McDowell made her home with Charles McDowell, her brother and head of the McDowell Paper Mills, at 5894 Greene street, Germantown, where her death occurred last week from heart failure that followed an attack of indigestion. She was in her 50th year and was the granddaughter of Joseph McDowell, founder of the McDowell Paper Mills and for years had been linked with welfare and charity organizations in the City of Brotherly Love. She was a member of St. Peters Episcopal Church in Germantown, and supervised the Sunday School Class of that religious institution. Her will provided for the continuance of her charitable work in connection with the church and provides for the McDowell Fund to carry out her wishes to give outings and Christmas cheer to the poor children of the city.

### Joseph N. Viot

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., December 27, 1927.—Joseph N. Viot, of South Manchester, Conn., treasurer and general manager of the Case and Marshall Company, Inc., manufacturers of paper board and specialties in their mill at Burnside, Conn., died Saturday, December 17, aged 53. Mr. Viot had been with the Case and Marshall Company, Inc., for about 25 years and was well known among paper stock dealers. He also operated the mill of Case Bros., Inc., at South Manchester, Conn. Mr. Viot was a son-in-law of A. Willard Case and a brother-in-law of Raymond S. Case, president of the Case and Marshall Company, Inc., and the A. Willard Case Company. A wife is living.

## Michigan Superintendents Meet

KALAMAZOO, Mich., December 19, 1927.—The Michigan Division of the American Pulp and Paper Mill Superintendents Association met at the Park-American hotel Thursday evening for dinner and program. Homer Stafford, superintendent of the Hawthorne Paper Company, was the speaker.

# PORTLAND, OREGON

Portland is in the heart of the big timber region of the Pacific Northwest. It also has an abundance of cheap hydro-electric power for manufacturing purposes, good ocean and railway shipping facilities and a fair supply of skilled labor, practically all of which is non-union.

Portland is also an ideal place to live. It has a mild climate, good water and plenty of nice hotels, apartment houses and homes. Also good schools, theaters, libraries, clubs and parks.

I would be pleased to serve you in the location, design and construction of the new mill of yours.

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**Bleached Spruce Sulphite and Soda, Kraft Pulp**

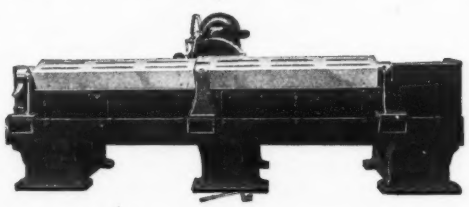
200 Fifth Avenue New York — 732 Sherman Street Chicago

503 Market St., San Francisco, Cal.

122 East 7th St., Los Angeles, Cal.

Sixth and Chestnut Sts., Philadelphia, Pa.

# Paper Knife Grinding



The Mammoth Stationary Knife Bar Traveling Cup Wheel Grinder, the product of years of consistent development in paper knife grinding service, has made its way into nearly universal adoption among the large paper mills. Of especially compact construction, sturdy massive design, for accurate work and long life, it requires a minimum of floor space, is full automatic, and convenient to operate.

For smooth keen edge grinding.

**Machinery Company of America**

**Big Rapids, Mich., U. S. A.**

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**Large Production**
**Ample Reserves**
**Prompt Deliveries**
**Purity 99½%**

TEXAS GULF SULPHUR CO.

41 E. 42nd Street New York City

Mine Gulf, Matagorda County, Texas

# Imports of Paper and Paper Stock

**NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS**

## NEW YORK IMPORTS

WEEK ENDING DECEMBER 24, 1927

### SUMMARY

Cigarette paper .....162 cs.
Wall paper .....137 bls., 1 ble., 25 cs.
Paper hangings .....26 bls., 35 cs.
News print .....582 rolls, 28 bls.
Printing paper .....129 cs.
Stencil paper .....129 rolls
Pergamyn paper .....38 cs.
Wrapping paper .....6 cs.
Packing paper .....20 rolls, 4 bls.
Drawing paper .....22 cs.
Filter paper .....30 bls., 1 ble., 18 cs.
Tissue paper .....108 cs.
Parchment paper .....7 cs.
Silk paper .....7 cs.
Surface coated paper .....248 cs.
Metal paper .....9 cs.
Basic paper .....41 cs.
Gold coated paper .....5 cs.
Writing paper .....11 cs.
Transfer paper .....11 cs.
Decalcomania paper .....40 cs.
Cardboard paper .....9 cs.
Colored paper .....5 cs.
Vegetable paper .....20 cs.
Paper spools .....17 cs.
Straw pulp board .....346 rolls
Straw board .....1,475 rolls
Miscellaneous paper ....1,823 rolls, 270 bls., 57 cs.

#### CIGARETTE PAPER

P. J. Schweitzer, Pres. Van Buren, Marseilles, 132 cs.
British American Tobacco Co., Rochambeau, Havre, 32 cs.

#### WALL PAPER

J. Dewar, New York, Hamburg, 1 cs.
A. Peats & Co., New York, Hamburg, 2 cs.
Atlas Wallpaper Co., New York, Hamburg, 1 ble.
T. F. Wilmot & Co., New York, Hamburg, 2 bls.
Reimen & Kuhnert Co., New York, Hamburg, 6 cs.
F. J. Emmerich, New York, Hamburg, 33 bls., 2 cs.
Globe Shipping Co., New York, Hamburg, 14 bls.
Globe Shipping Co., Thuringia, Hamburg, 14 bls.
F. J. Emmerich, Minnesota, London, 8 bls., 1 cs.
F. J. Emmerich, Calgaria, Liverpool, 5 cs., 5 cs., 22 bls.
A. C. Dodman, Jr., Inc., Majestic, Southampton, 17 bls., 3 cs.
J. E. Bernard & Co., Winifredian, Antwerp, 27 bls.

#### PAPER HANGINGS

W. P. Nelson Co., Columbus, Bremen, 2 cs.
A. C. Dodman, Jr., Inc., Franconia, Liverpool, 3 bls.
W. H. S. Lloyd & Co., Minnesota, London, 7 cs., 55 bls.
Whiting & Patterson Co., Inc., Majestic, Southampton, 18 cs.
Hensel, Bruckman & Lorbacher, Rochambeau, Havre, 8 cs.
A. C. Dodman, Jr., Inc., Rochambeau, Havre, 7 cs.
A. C. Dodman, Jr., Inc., Calgaria, Liverpool, 23 bls.

#### NEWS PRINT

Ossian Ray, Korsholm, Gothenburg, 77 rolls, 17 bls.
M. Gottesman & Co., Inc., Korsholm, Gothenburg, 190 rolls.
T. Barrett & Son, Korsholm, Gothenburg, 11 bls.
Perkins, Goodwin & Co., Pres. Harding, Bremen, 315 rolls.

#### PRINTING PAPER

Perkins, Goodwin & Co., Thuringia, Hamburg, 58 cs.
P. C. Zuhlke, Winifredian, Antwerp, 71 cs.

#### STENCIL PAPER

Arlac Dry Stencil Co., New York, Hamburg, 39 rolls.

#### PERGAMYN PAPER

F. C. Strynz, Thuringia, Hamburg, 38 cs.

#### WRAPPING PAPER

Birn & Wachenheim, Winifredian, Antwerp, 6 cs.

#### PACKING PAPER

Consumers Paper Co., Wytheville, Rotterdam, 4 bls.
National City Bank, Winifredian, Antwerp, 20 rolls.

#### DRAWING PAPER

Steffens Jones Co., Gaasterdyk, Rotterdam, 11 cs.
Devoe & Raynolds Co., Californie, Havre, 21 cs.

#### FILTER PAPER

H. Reeve Angel & Co., Inc., Minnesota, London, 14 cs.
A. Giese & Son, Thuringia, Hamburg, 4 cs., 1 ble.
A. Giese & Son, Majestic, Southampton, 30 bls.

#### TISSUE PAPER

B. F. Drakenfeld & Co., Franconia, Liverpool, 2 cs.
Old Master Paper & Pulp Co., New York, Hamburg, 88 cs.

#### PARCHMENT PAPER

Walker, Goulard, Plehn Co., Thuringia, Hamburg, 7 cs.

#### SILK PAPER

S. Gilbert, Columbus, Bremen, 7 cs.

#### SURFACE COATED PAPER

Globe Shipping Co., Columbus, Bremen, 75 cs.
Globe Shipping Co., New York, Hamburg, 15 cs.
Hensel, Bruckman & Lorbacher, New York, Hamburg, 5 cs.
W. von Doorn, Gaasterdyk, Rotterdam, 11 cs.
P. C. Zuhlke, Winifredian, Antwerp, 92 cs.
Gevaert Co. of America, Winifredian, Antwerp, 50 cs.

#### METAL PAPER

Hensel, Bruckman & Lorbacher, Columbus, Bremen, 8 cs.
Hensel, Bruckman & Lorbacher, New York, Hamburg, 1 cs.

#### BASIC PAPER

American Express Co., Bolivier, Antwerp, 41 cs.

#### GOLD COATED PAPER

F. Murray Hill, Pres. Harding, Bremen, 5 cs.

#### WRITING PAPER

Guibout freres, Majestic, Southampton, 7 cs.
Guibout freres, Leviathan, Southampton, 3 cs.
H. J. Devoy Co., Leviathan, Southampton, 1 cs.

#### TRANSFER PAPER

F. L. Kramer & Co., Pres. Harding, Bremen, 11 cs.

#### DECALCOMANIA PAPER

C. W. Sellers, Columbus, Bremen, 9 cs.
L. A. Consmiller, Pres. Harding, Bremen, 6 cs.
B. F. Drakenfeld & Co., Franconia, Liverpool, 17 cs.
B. F. Drakenfeld & Co., Franconia, Liverpool, 8 cs. (simplex).

#### CARDBOARD PAPER

Steffens Jones Co., Gaasterdyk, Rotterdam, 9 cs.

#### COLORED PAPER

C. W. Williams & Co., Winifredian, Antwerp, 5 cs.

#### VEGETABLE PAPER

P. Maguire & Co., Winifredian, Antwerp, 20 cs.

#### PAPER SPOOLS

L. D. Robbins Co., Columbus, Bremen, 12 cs.
Ichler & Von der Heydt, Columbus, Bremen, 5 cs.

#### STRAW PULP BOARD

J. P. Heffernan Paper Co., Gaasterdyk, Rotterdam, 346 rolls.

#### STRAW BOARD

Perkins, Goodwin & Co., Gaasterdyk, Rotterdam, 475 rolls.
Haas Bros., Gaasterdyk, Rotterdam, 586 rolls.
R. Wilson Paper Corp., Gaasterdyk, Rotterdam, 156 rolls.
State Bank, Gaasterdyk, Rotterdam, 130 rolls.
A. Vuyk, Gaasterdyk, Rotterdam, 128 rolls.

#### MISCELLANEOUS PAPER

M. M. Cohen, Korsholm, Gothenburg, 26 bls.
H. Reeve Angel & Co., Inc., Korsholm, Gothenburg, 52 bls.
C. K. MacAlpine & Co., Korsholm, Gothenburg, 89 rolls, 14 bls.
The Borregaard Co., Inc., Korsholm, Gothenburg, 1,315 rolls.
Arkell Safety Bag Co., Korsholm, Gothenburg, 102 rolls, 70 bls.
Crepe Kraft Co., Korsholm, Gothenburg, 141 rolls.
Gilbert Paper Co., Korsholm, Gothenburg, 176 rolls, 108 bls.
E. H. Sergeant & Co., Korsholm, Gothenburg, 4 cs.
G. W. Sheldon & Co., American Farmer, London, 2 cs.
Innoxa Laboratories, Inc., Rochambeau, Havre, 14 cs.
C. B. Richard & Co., Rochambeau, Havre, 32 cs.
P. H. Petry & Co., Rochambeau, Havre, 5 cs.

#### RAGS, BAGGINGS, ETC.

R. Canovai & Son, Rigel, Marseilles, 208 bls. rags.
E. Butterworth & Co., Inc., Rigel, Genoa, 300 bls. rags
S. Birkenstein & Son, M. Calvo, Barcelona, 72 bls. jute waste.
S. Birkenstein & Son, M. Calvo, Barcelona, 445 bls. rags.
Castle & Overton, Inc., Highland Prince, Dundee, 12 bls. paper stock.
E. J. Keller Co., Inc., Highland Prince, Dundee, 75 bls. paper stock.
Anglo South American Trust Co., Estonia, Danzig, 486 bls. rags.
Bulkley, Dunton & Co., Gaasterdyk, ——, 170 bls. rags.
C. R. Spence, Korsholm, Gothenburg, 20 bls. new cuttings.
Baring Bros. & Co., Kearney, Manchester, 73 bls. bagging.
A. Bloch & Co., Kearney, Manchester, 74 bls. bagging.
Castle & Overton, Inc., Kearney, Manchester, 50 bls. bagging.
A. H. Searle, Kearney, Belfast, 60 bls. rags.
M. Snedeker Corp., Kearney, Belfast, 166 bls. rags.
E. Vernesse, Marengo, Antwerp, 288 bls. bagging.
National City Bank, Marengo, Antwerp, 280 bls. bagging.
Bulkley, Dunton & Co., Marengo, ——, 260 bls. bagging.
E. Butterworth & Co., Marengo, Hull, 173 bls. paper stock.
C. R. Spence, Letitia, Glasgow, 39 bls. rags.
Brown Bros. & Co., Letitia, Glasgow, 28 bls. rags.
J. Cohen Son & Co., Letitia, Glasgow, 11 bls. rags.
J. Cohen Son & Co., American Farmer, London, 27 bls. rags.
Hanover National Bank, American Farmer, London, 13 bls. rags.
National City Bank, Californie, Havre, 30 bls. bagging.
Goldman, Sachs & Co., Californie, Havre, 182 bls. bagging.
National Bank of Commerce, Californie, Havre, 121 bls. bagging.
Brown Bros. & Co., Californie, Havre, 61 bls. new cuttings.
Chase National Bank, Californie, Havre, 18 bls. rags.
Royal Mfg. Co., Californie, Havre, 89 bls. cotton waste.
Chase National Bank, Californie, Dunkirk, 53 bls. rags.
Katzenstein & Keene, Californie, Dunkirk, 53 bls. rags.
Bank of New York, Californie, Dunkirk, 107 bls. bagging.
Royal Mfg. Co., Innoko, Rotterdam, 135 bls. cotton waste.
Robert Blank, Innoko, Rotterdam, 259 bls. bagging.
Brown Bros. & Co., Thuringia, Hamburg, 42 bls. rags.
Robert Blank, Thuringia, Hamburg, 3 bls. rags.
E. J. Keller Co., Inc., Wytheville, Rotterdam, 376 bls. rags.
E. Mayer, Wytheville, Rotterdam, 77 bls. rags.
Kidder Peabody Accep. Corp., Mercier, Antwerp, 163 bls. rags.
Bulkley, Dunton & Co., Westerdyk, ——, 40 bls. rags.
Melrose Paperstock Co., Pres. Harding, Bremen, 122 bls. rags.
J. Cohen Son & Co., Pres. Harding, Bremen, 21 bls. thread waste.
A. W. Fenton, Inc., Pres. Harding, Bremen, 52 bls. rags.
Union Waste Co., Pres. Harding, Bremen, 24 bls. threads.

#### OLD ROPE

Brown Bros. & Co., Gaasterdyk, Rotterdam, 100 coils, 38 pkgs.
W. Steck & Co., Gaasterdyk, Rotterdam, 31 coils.
Brown Bros. & Co., Marengo, Hull, 199 coils.
Brown Bros. & Co., Marengo, Newcastle, 292 coils.
Bulkley, Dunton & Co., Wytheville, ——, 39 bls.
E. J. Keller Co., Inc., Wytheville, Rotterdam, 31 coils.
Brown Bros. & Co., Winifredian, Antwerp, 81 coils.

#### CASEIN

Kalbfleisch Corp., Pan America, Buenos Aires, 2,918 bags.
Hanover National Bank, Pan America, Buenos Aires, 334 bags.
National City Bank, Pan America, Buenos Aires, 84 bags.

*(Continued on page 56)*

**E. J. KELLER COMPANY**
INCORPORATED
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NEW YORK

FOREIGN AND DOMESTIC
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COTTON, JUTE AND FLAX WASTES
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**Single, Duplex and Diagonal**

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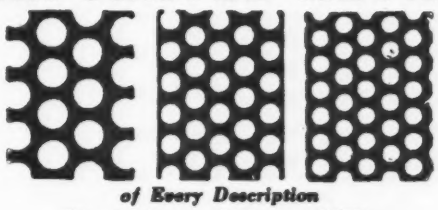
**HAMBLET MACHINE CO.**
LAWRENCE, MASS.

**PERFORATED METALS**



*of Every Description*
For Pulp and Paper Mills
THE HARRINGTON & KING PERFORATING CO.
5652 Fillmore St., Chicago, Ill.
NEW YORK OFFICE: 114 Liberty St.

# Imports of Paper and Paper Stock

(*Continued from page 54*)

WOOD PULP

E. J. Keller Co., Inc., Gaasterdyk, Rotterdam, 600 bls. wood pulp.
M. Gottesman & Co., Inc., Gaasterdyk, Rotterdam, 1,005 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Korsholm, Gothenburg, 500 bls. sulphite.
E. M. Sergeant & Co., Korsholm, Gothenburg, 350 bls. sulphite.
Parsons & Whittemore, Inc., Korsholm, Gothenburg, 120 bls. wood pulp.
Price & Pierce, Ltd., Korsholm, Gothenburg, 1,000 bls. sulphite.
Buck, Kiaer & Co., Inc., Korsholm, Stockholm, 1,200 bls. wood pulp.
Castle & Overton, Inc., New York, Hamburg, 1,005 bls. wood pulp.
Castle & Overton, Inc., Wytheville, Rotterdam, 219 bls. wood pulp.
Parsons & Whittemore, Inc., Nordvard, Hamburg, 167 bls. wood pulp.

WOOD FLOUR

The Burnet Co., Wytheville, Rotterdam, 725 bags.

WOOD PULP WADDING

Birn & Wachenheim, Gaasterdyk, Rotterdam, 50 bls.
Bendix Paper Co., Gaasterdyk, Rotterdam, 50 bls.

WOOD PULP BOARDS

C. K. MacAlpine & Co., Korsholm, Gothenburg, 24 bls.

## PHILADELPHIA IMPORTS

WEEK ENDING DECEMBER 24, 1927

American Exchange Irving Trust Co., Rigel, Marseilles, 63 bls. old rope.
Salomon Bros. & Co., Rigel, Marseilles, 160 bls. rags.
S. Birkenstein & Son, Rigel, Valencia, 467 bls. rags.
American Exchange Irving Trust Co., Rigel, Leghorn, 445 bls. rags.
D. I. Murphy, M. Calvo, Barcelona, 67 bls. rags.
Union National Bank, M. Calvo, Barcelona, 169 bls. rags.
J. A. Steer & Co., Highland Prince, Dundee, 380 bdls. rope.
J. Anderson & Co., Korsholm, Gothenburg, 500 bls. sulphite.
Johanson, Wales & Sparre, Inc., Korsholm, Gothenburg, 1,685 bls. sulphate.
J. A. Steer & Co., Korsholm, Gothenburg, 77 coils old rope.
National Bank of Commerce, Californie, Havre, 130 bls. rags.
Equitable Trust Co., Californie, Havre, 202 bls. rags.
Goldman, Sachs & Co., Californie, Havre, 281 bls. rags.
Chase National Bank, Californie, Havre, 156 bls. rags.
Fidelity Trust Co., Californie, Dunkirk, 228 bls. rags.
Chase National Bank, Californie, Dunkirk, 13 bls. rags.
Bank of New York, Californie, Dunkirk, 118 bls. rags.
Castle & Overton, Inc., Wytheville, Rotterdam, 360 bls. wood pulp, 57 tons.
Wolsey Import Co., Wytheville, Rotterdam, 64 bls. rags.
S. E. Ingber, Wytheville, Rotterdam, 88 bls. rags.
E. A. Stone, Wytheville, Rotterdam, 111 bls. rags.
E. J. Keller Co., Inc., Wytheville, Rotterdam, 136 bls. rags.
Parsons & Whittemore, Inc., A. von Bayer, Hamburg, 614 bls. wood pulp.
Bulkley, Dunton & Co., Fernlane, ——, 500 bls. wood pulp.
Bulkley, Dunton & Co., York, ——, 250 bls. wood pulp.
Bulkley, Dunton & Co., Binnendyk, ——, 86 bls. rags.

## NEW ORLEANS IMPORTS

WEEK ENDING DECEMBER 24, 1927

Woodpulp Service Corp., Tampa, Oslo, 1,360 bls. wood pulp.

## NORFOLK IMPORTS

WEEK ENDING DECEMBER 24, 1927

National City Bank, Innoko, Rotterdam, 167 bls. bagging.

## BALTIMORE IMPORTS

WEEK ENDING DECEMBER 24, 1927

Royal Mfg. Co., Kearney, Manchester, 42 bls. cotton waste.
Baltimore Trust Co., Californie, Havre, 68 bls. rags.
National City Bank, Californie, Havre, 225 bls. rags.
National City Bank, Californie, Havre, 21 bls. bagging.
Baltimore Trust Co., Californie, Dunkirk, 39 bls. rags.
New York Trust Co., Californie, Dunkirk, 243 bls. rags.
National City Bank, Californie, Dunkirk, 312 bls. bagging.
National City Bank, Californie, Dunkirk, 505 bls. rags.
Bulkley, Dunton & Co., City of Alton, ——, 235 bls. wood pulp.
Bulkley, Dunton & Co., Fernlane, ——, 5,325 bls. wood pulp.
Bulkley, Dunton & Co., York, ——, 250 bls. wood pulp.
Woodpulp Service Corp., Dania, Oslo, 1,600 bls. sulphite.
Woodpulp Service Corp., A. von Bayer, Hamburg, 2,250 bls. sulphite.

## BOSTON IMPORTS

WEEK ENDING DECEMBER 24, 1927

Bulkley, Dunton & Co., Atlantic, ——, 7,600 bls. wood pulp.
Bulkley, Dunton & Co., J. Skinner, ——, 625 bls. wood pulp.
Bulkley, Dunton & Co., J. Skinner, ——, 17 bls. rags.

## PORTLAND IMPORTS

WEEK ENDING DECEMBER 24, 1927

Bulkley, Dunton & Co., Argosy, ——, 5,080 bls. wood pulp.

## Swedish Sulphite More Active

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 14, 1927.—Sales of sulphite pulp during September increased slightly, according to a report from Consul General John B. Osborne at Stockholm. Prices, however, were not stimulated by this activity but continued the downward trend noticeable for some time. No improvement was noticeable in the ground wood industry, which still continues depressed. In the export field, shipments of mechanical ground wood have made a better showing than other products in this group, consignments up to the end of September exceeding those of the corresponding period in 1926 by 30 per cent. On the other hand, exports of chemical pulp and paper show very little change over last year.

Swedish news print mills during the first ten months of the current year produced 164,497 metric tons as against 165,964 tons during the corresponding period of last year.

## Longview Fibre Plant Makes First Shipment

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., December 16, 1927.—The steamer Georgiana of the American-Hawaiian Steamship fleet is loading 250 tons of wood pulp at Longview, Wash. This is the first shipment of products from the plant of the Longview Fibre Company which started operations in October. The pulp is consigned to New York.

The next four or five vessels of this steamship line will also call at Longview for the wood pulp, and it is expected that from 250 to 500 tons will be in each shipment, now that manufacture is well under way in the new mill.

## Big Paper Projects in Nova Scotia

Big projects for the development of the pulp and paper industry in Nova Scotia are under way. The Royal Securities Corporation of Montreal, are reported to have submitted to the Nova Scotia government plans for the establishment of a 200-ton news print mill, conditionally on the government agreeing to the development of the necessary power to operate it. Ralph P. Bell, of Halifax, a large pulp wood exporter, is reported to have submitted a project for the establishment of another 200-ton news print mill, conditionally on the government agreeing to a thirty-year lease of Crown pulp wood lands and the erection by the government of facilities to supply power. The A. P. & W. Pulp and Paper Company, which owns some timber limits in the southern sections of the Province, and which has been exporting pulp wood for some years, is understood to be making an offer similar to Mr. Bell's. James T. Cumming, of New Glasgow, N. S., also has a plan for the erection of a pulp and paper mill on the Straits of Canso, and the utilization of the Crown lands in Cape Breton.

## Walter A. Poos Resigns

FRANKLIN, Ohio, December 19, 1927.—Announcement has just been made of the resignation of Mr. Walter A. Poos, vice president and sales manager of the Miami Valley Coated Paper Company, Franklin, Ohio, effective January 1, 1928. He became associated with the company at the time of its incorporation in November, 1925, when it took over the property of the Franklin Coated Paper Company. Prior to that time he was assistant sales manager of the Peninsular Paper Company, Ypsilanti, Mich. He has not announced his future plans.

**Cotton and Paper Rolls**
**Super Calenders**
**Friction Calenders**
**Embossing Calenders**
**Hydraulic Presses and Pumps**

*Successors to the Granger Foundry & Machine Co.*

**The Textile-Finishing Machinery Company**
**PROVIDENCE, R. I.**

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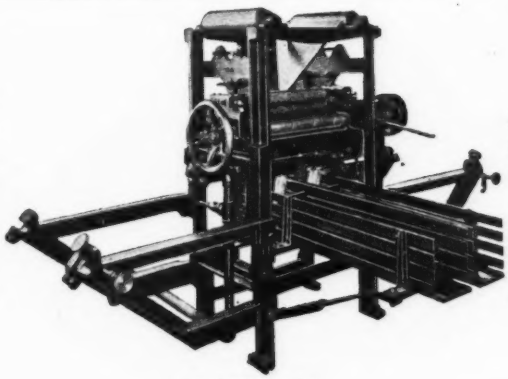

ROTARY

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**GUARANTEED PRODUCTION**

TOWEL FOLDERS | PRINTING DEVICES | BUNDLING PRESSES

**PAPER CONVERTING MACHINE CO.**
GREEN BAY, WIS.

**Ferguson**
ENGINEERS

*Design—Build—Rebuild —Report—Appraise*

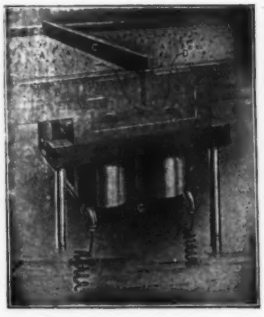
**POWER PLANTS *and* COMPLETE PAPER MILL PROJECTS**

One organization under one contract guarantees price, delivery date and satisfactory results.

*Representative*
*Ferguson customers in the paper industry:*

Hinde & Dauch Co.
A. P. W. Paper Co.
Mead Pulp and Paper Co.
Chillicothe Paper Co.
Warren Mfg. Co.
Spencer-Wynne Paper Company
Bennington Wax Paper Co.
Oswego Falls Corp.
Fairfield Paper Co.

THE H. K. FERGUSON COMPANY
Hanna Bldg. · Cleveland, Ohio Phone: Superior 3620
*New York · Detroit · Birmingham · Tokio, Japan*



**TYPE "B" IRON EXTRACTOR**

It consists of special magnetic surfaces of great power over which the paper stuff is made to pass. As a result, all the iron and many other foreign substances are completely extracted. Hundreds of these devices are in use daily and no one of them has failed to give complete satisfaction. Write us for Bulletins and full data.

**THE ROLAND T. OAKES CO., Holyoke, Mass.**

*Electrical Specialists.* *Established 1885*

*for* **PAPER MAKING**

## New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 28, 1927.

Due to the curtailment of trading on account of the Yuletide holiday season, only a moderate amount of business was transacted in the local paper market during the past week. Practically all grades of paper, however, had enjoyed a heavy demand during the last quarter of the year. No changes in quotations have been recorded and prices generally are being well maintained.

The news print market is in a sound position. An encouraging feature is the fact that the greatly increased production maintained this year has been so readily absorbed by the publishers. Spot supplies are adequate for current requirements. Contracts for 1928 delivery are being made at the same quotations which have prevailed during the past twelve months.

Conditions in the paper board market are satisfactory although the demand has fallen off slightly. Prices are being maintained at former levels, in most instances. The fine paper market was fairly active during the past week with prices steady and unchanged. The coarse paper market exhibits a seasonal tendency and wrapping paper continues to move in excellent volume.

### Mechanical Pulp

Consumption of ground wood has fallen off slightly, due in all probability to the inventory period. Shipments against standing contracts, however, have been proceeding at a normal pace for the season. Inquiries for future business are said to be fairly numerous and the future outlook is promising. Prices of mechanical pulp are unchanged and there is little talk of concessions around.

### Chemical Pulp

While trading in the chemical pulp market was mostly along routine lines during the past week, prices remained steady and unchanged. Contract withdrawals continue to move in a satisfactory manner. Reports of a strike in the Swedish pulp mills were evidently premature as we are informed by a reliable authority that the employers and workmen have made an agreement regarding wages in the coming year which has clarified the situation.

### Old Rope and Bagging

No radical changes were reported in the old rope and bagging market during the past week. Both domestic and imported old rope are in moderate request. Quotations remain unaltered. As usual at this time of the year, the demand for bagging is light and not much improvement is expected until after the inventory period.

### Rags

With many of the paper mills taking inventories at this time, not much interest is being displayed in the rag market. Domestic roofing rags are in moderate request but the demand for old cotton rags has fallen off. Whites and blues were slightly more active with prices somewhat steadier. The imported rag situation is practically unchanged.

### Waste Paper

Most of the orders transacted in the paper stock market during the past week were for urgent requirements. While the tone of the market is somewhat easier, inquiries for future delivery are coming along in good volume and future prospects are bright. Book paper stock continues active and old kraft machine compressed bales are still in good demand.

### Twine

The twine market has enjoyed an excellent last quarter of the year although the demand is gradually falling off now the holidays are nearly ended. Some close observers of the twine market anticipate a slight revision of prices shortly. Opinions regarding the outlook for the forthcoming year vary, although, on the whole, the industry is inclined to be optimistic.

## Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 28, 1927.—The Government Printing Office will receive bids on January 4 for 20,000 pounds of M. F. printing paper in 27½ inch rolls. Bids will also be received on the same date for 5,000 pounds of 28x34—142½ white sulphite ledger paper.

The Printing Office has received the following bids for 36,000 pounds of 22x32—70, marble grained lined board: Mathers-Lamm Paper Company, at $74.00 and $76.50 per ton; C. B. Hewitt & Bros., Inc., at $74.75 less 1 per cent; Whitaker Paper Company, $73.92; Thomas Barrett & Sons, $76.50; Barton, Duer & Koch Paper Company, $77.00; and Old Dominion Paper Company, $75.98.

The Printing Office has also received the following bids for 640 pounds of 21x32—46½, violet bond paper: Old Dominion Paper Company, 20.9 cents per pound; and Whitaker Paper Company, 30 cents.

The Government Printing Office has received the following bids for 40,000 pounds of 25x30—No. 20 binders board: Whitaker Paper Company, at $70.00 per ton; Mathers-Lamm Paper Company, $61.00; Dobler & Mudge, $60,000; Barton, Duer & Koch Paper Company, $65.00; and The Davey Company, $70.00.

The Printing Office has also received the following bids for 35,000 pounds of green and salmon, 23½ or 26¾ inch rolls of calendered tag board: Barton, Duer & Koch Paper Company, at 8.5 cents per pound; Dobler & Mudge, 6.25 and 6.625 cents; Reese & Reese, 8.795 cents; Whitaker Paper Company, 10.2 cents; and R. P. Andrews Paper Company, 8.38 cents.

## C. P. Lesh Paper Co. Adds New Lines

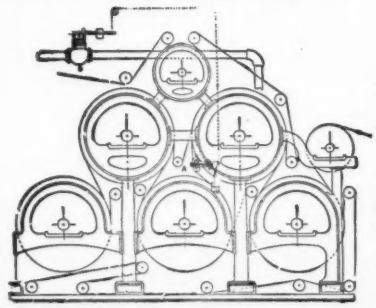
INDIANAPOLIS, Ind., December 5, 1927.—The C. P. Lesh Paper Company is one of the new distributors for Silvertone Clasp Envelopes, manufactured by the Standard Envelope Manufacturing Company, Cleveland, Ohio.

An announcement carrying this information and showing samples of the envelope was recently mailed to the Indiana printing trade.

Silvertone Clasps are made from an attractive sheet of specially watermarked Gray Kraft Paper and are popular because they are reasonably priced and good enough looking to be used as enclosures for high grade catalogs and printed pieces.

Other recent Lesh mailings include a signature on Prime English Finish Book and a large broadside outlining the C. P. Lesh Paper Company's tie up with the Strathmore Paper Company's advertisements which are running regularly in the Saturday Evening Post.

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

# Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

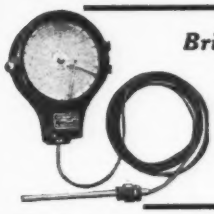
W. F. PICKLES Buckland, Conn.

GENERAL Aluminum Sulphate CHEMICAL

GENERAL CHEMICAL COMPANY 40 RECTOR STREET, NEW YORK

SAVEALLS AMERICAN CONTINUOUS FILTER DECKERS THICKENERS UNITED FILTERS CORP. HAZLETON, PA. BLEACH WASHERS

# Appleton Felts and Jackets



*Bristol's Recording Instruments*

For Pressure, Vacuum, Temperature, Liquid Level, Humidity, Speed, Electric Units, etc.

The Bristol Company Waterbury, Connecticut

BRISTOL'S RECORDING INSTRUMENTS

"Ask Your Neighbor What He Thinks of Them"

# 109 JENSSEN

Two-Tower Acid Systems now in operation or building.

Jenssen Spray Type Cooler
Bullard Gas Washer
Decker Cooking Process
Kamyr Feltless Machines
Kamyr Pulp Presses
Strindlund Relief Cooler

G. D. Jenssen Company
200 5th Ave. New York, N. Y.

## Perforated Metal Screens

*for every purpose*

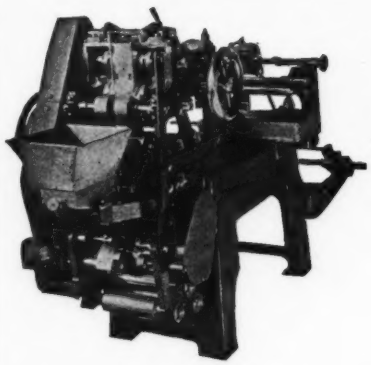
Elevator Buckets (plain or perforated)
Stacks and Tanks
"Miteo" Interlocked Steel Grating—Light and Heavy Steel plate Construction

HENDRICK MFG. CO., Carbondale, Pa.

New York Office 30 Church St. Pittsburgh Office: 904 Union Trust Bldg. Hazleton, Pa., Office: 738 W. Diamond Ave.

## Ruths Accumulator Company, Inc.

292 Madison Av., New York City



# HIGHEST SPEED Paper Bag Machinery

Get My Quotations Before Placing Your Orders

*Special Machinery Designed and Built*

A. L. PARRISH,
1702 Robinson St., South Bend, Ind.

# Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 28, 1927.

Only a moderate amount of business was transacted in the local chemical market during the past week. Contract withdrawals proceeded in a normal manner for the season. Quietness prevailed in the spot market. The schedule of prices was well maintained, in most instances, and there is apparently little shading being done at the present time. Inquiries for the future are fairly numerous and the outlook is encouraging.

BLANC FIXE.—Both the pulp and the powder are in fair demand at present and the blanc fixe market is in a sound position. Prices remain unaltered. The pulp is quoted at $60 per ton, in bulk, while the powder is selling at from 4 cents to 4¼ cents a pound, in barrels, at works.

BLEACHING POWDER.—Substantial tonnages of bleaching powder are being purchased on contract for delivery next year. Shipments against standing contracts are also proceeding in a satisfactory manner. Bleaching powder is quoted at from $2 to $2.35 per 100 pounds, in large drums, at works, according to quantity and size of contract.

CASEIN.—The casein market exhibited an easier undertone during the past week and the recent advanced prices failed to hold. Both the imported and the domestic products were only in moderate request. Domestic casein is now selling at from 17½ cents to 18½ cents a pound. Imported casein is quoted at from 18 cents to 18½ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market. Inquiries are being received for future business in good volume. Prices remain unchanged. Solid caustic soda is offered at from $3 to $3.10 per 100 pounds. The flake and the ground are quoted at from $3.40 to $3.50 per 100 pounds, in large drums, at works.

CHINA CLAY.—Most of the business transacted in the china clay market during the past week was along routine lines. Prices were practically unchanged. Imported china clay is still selling at from $15 to $25 a ton, ship side. Domestic paper makers' clay is quoted at from $8 to $9 a ton, in bulk, at mine, and pulverized at from $10 to $12 per ton.

CHLORINE.—Manufacturers of chlorine are booking a heavy volume of contract orders for the coming year. Shipments are moving into consumption at a good pace. Chlorine is quoted at 3½ cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 3¾ cents to 4 cents a pound.

ROSIN.—With the report that offerings of rosin would probably be smaller in 1928, prices of the various grades advanced sharply. At the naval stores, the grades of gum rosin used in the paper mills are now selling at from $9.30 to $9.50 per 280 pounds, gross, in barrels, at dock. Wood rosin is quoted at $6.50 per 280 pounds, in barrels, southern shipping points.

SALT CAKE.—The salt cake market continues active. An excellent amount of new business was transacted during the week for forward delivery. Prices remain steady. Salt cake is quoted at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is selling at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—Demand for soda ash is quite satisfactory for the holiday season. Supplies are moving into consumption at a normal rate. The recently revised quotations are being maintained, in most instances. Contract prices on soda ash, in car lots, at works, rule as follows: in bulk, $1.15; in bags, $1.32½; and in barrels, $1.55.

STARCH.—The position of the starch market is practically unchanged. While offerings of this product are not excessive, stocks on hand appear to be ample for current requirements. Shipments continue to go forward at a normal rate. Special paper makers' starch is still quoted at $3.07 per 100 pounds, in bags, and at $3.34 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Although the amount of new business transacted in the sulphate of alumina market during the past week was only moderate, the position of the industry is very sound. Contract shipments are moving into consumption in a normal manner. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.45 per 100 pounds. The iron free is selling at from $2 to $2.05 per 100 pounds, at works.

SULPHUR.—Demand for sulphur continues active and contracts covering the forthcoming year's requirements are being booked in excellent volume. Shipments against standing contracts are moving steadily. Sulphur continues to be quoted at from $18 to $19 a ton, in bulk, at mine, according to quantity, on contract orders. The spot quotation is $20 per ton.

TALC.—No radical changes have been recorded in the talc market of late. Prices are holding up to former levels in a satisfactory manner. Quotations on domestic talc still range from $16 to $18 a ton, at eastern mines. French talc is quoted at from $18 to $22 a ton, ship side.

## Clayton DeMers Tendered Banquet

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., December 17, 1927.—Clayton DeMers, for years chief engineer at the plant of the Union Bag and Paper Corporation, who resigned recently, was tendered a banquet at the Halfway House, Lake George, by his associates at the plant.

There were 57 guests present with George S. Witham, Sr., general manager of the Union Bag Corporation, acting as toastmaster. Short talks were given by George S. Witham, Jr., former plant superintendent, Thomas R. Remsen, and others.

Mr. DeMers, who at the present time is mayor of Hudson Falls, was presented with a gold watch and chain in behalf of the machine shop and repair crew and a purse of money by other employees of the corporation, General Manager Witham making the presentation speech. He called attention to the fact that Mr. DeMers has worked for the Union Bag and Paper Corporation for nineteen years, beginning as a foreman in the machine shop where he spent four years and the remaining fifteen years serving as engineer in various capacities but mostly in charge of repairs and construction work.

In closing his remarks Manager Witham said: "We do not know of a man around us who has a cleaner record or is more deserving of praise than he is for the work he has done and the kindness he has always expressed for his fellow workmen and I believe I am voicing the sentiments of everyone present by wishing him all the success that can come to a deserving person."

## Paper Shipping Closes on Champlain Canal

GLENS FALLS, N. Y., December 17, 1927.—There will be no repetition this year of conditions which prevailed on the Champlain Canal last winter when numerous barges loaded with paper were frozen into the ice. What is believed to be the last paper shipments of the season passed through the canal this week and with the close of navigation imminent no further paper shipments are expected.

Navigation on the canal has been interfered with for several weeks by unusually high water due to the recent heavy rains. Several fleets of barges en route from Canadian points were tied up at various places along the canal because of the high water for several days. A fleet of thirty barges, many of these containing paper shipments from Canada, which had been forced to tie up at Whitehall braved the dangers of high water navigation and made a successful dash for the Hudson early this week when a sudden cold spell threatened a freeze-up similar to last winter.

The past season has seen the Champlain Canal handling a greater tonnage of pulp and paper than has been the case in any season in the history of the canal. Practically all of the Hudson Valley mills, even those situated a considerable distance from the terminals, have been using the water route.

TRADE MARK

B

Registered

DIAMOND B SPLICING TISSUE

HIGHEST QUALITY

SPECIALLY MADE FOR THE PAPER TRADE
*PRICES ON APPLICATION*

BEMIS ASSOCIATES INC.

WATERTOWN, MASS.

Clay

300 tons daily

AMERICAN MADE FOR AMERICAN TRADE

AT LAST!!

"An American Coating Clay"

*H. T. Brand Coating Clay*, Highest Grade Filling Clay, being used in some of the largest paper mills in the country. Send for samples and article on *"An American Coating Clay."* Forty-two years experience in American washed clays are back of this product.

*Let us submit sample and quote you.*

THE

EDGAR BROS. CO.

50 Church St.,
NEW YORK

FIDALGO DRYING SYSTEM

*Wishing Our Good Friends in the Trade*

A PROSPEROUS NEW YEAR

TECHNICAL ECONOMIST CORPORATION

40 Rector Street,
New York City

ALPHA FIBRE

*Uniform Quality*

Alpha takes the place of most grades of rags in the making of fine papers. Its absolute regularity and greater purity maintain your high standards.

Brown Company

PORTLAND, MAINE

Your Card in This Space

Will Bring Results

*Rates on Application*

# Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

| BONDS | BID | OFFERED |
|---|---|---|
| Advance Bag & Paper, 7s 1943 | 105 | 107 |
| A. P. W. Pulp & Power, 7s 1945 | 101 | 102 |
| American Writing Paper, 6s 1947 | 80 | 82 |
| Bastrap Pulp & Paper, 6½s 1940 | 100 | 103 |
| British Columbia Pulp & Paper, 6s 1950 | 85 | 90* |
| Beaver Products Corp., 7½s 1942 | 106 | 109 |
| Bedford Pulp & Paper, 6½s 1942 | 98½ | None |
| Brown Paper Co., 1st 5½s 1946 | 96½ | 99 |
| Bryant Paper Co., 6s 1942 | 100½ | 102 |
| Cape Breton Pulp & Paper, 6s 1932 | 101 | 103 |
| Central Paper, 7s 1933 | 85 | None |
| Central Paper Serial 6, 6½s 1942 | 89 | ... |
| Champion Coated Paper, 6s 1926 to 1932 | 99 | ... |
| Champion Fibre, 8s 1930 | 100 | .. |
| Champion Paper Corp'n, 1st 6s 1945 | 95 | 97 |
| Continental Paper Products, 6½s 1943 | 88 | 91½ |
| Cornell Wood Prod., 7½s 1937 | 100 | 104* |
| Crown Willamette Paper, 6s 1951 | 100 | 102 |
| Donnaconna Paper, 6s 1940 | 101 | 102½ |
| Dells Paper & Pulp Serial, 6s 1926-38 | *95 | ... |
| Eastern Mfg. Co., 7s 1938 | 89 | 91 |
| Eddy Paper, 7½s 1931 | 101 | 103 |
| Escanaba Paper Serial, 6s 1928 | 99¾ | ... |
| Filer Fibre Serial, 7s 1926-39 | 95 | ... |
| Fort Orange Paper, 7s 1942 | 99 | 102 |
| Fox River Paper, 7s 1931 | 99 | ... |
| Gair Company, 5½s 1942 | 96 | 99 |
| Gilbert Paper Co., 6½s 1926-29 | 91 | None |
| Hammermill Paper, 6s 1939 | 100 | 103* |
| Hoberg Paper & Fibre, 7s 1937 | 94½ | 96 |
| Itaska Paper & Prairie River Power, J+5½s 1926-38 | 99 | 101 |
| Itaska Paper, 1st 6s 1933-38 | 99 | 101 |
| Kalamazoo Veg. Parchment, 6s 1938 | 98 | ... |
| Marinette & Menominee, 7½s 1936 | 100 | 103 |
| Menasha Printing & Carton, 6½s 1939 | 99½ | ... |
| Monroe Paper Products, 7½s 1932 | 96 | ... |
| Munising Paper, 6s 1927-36 | 96 | 100 |
| Nekoosa Edwards, 1st Ref. 6s 1928 to 1942 | 96 | 99* |
| Orono Pulp & Paper, 6s 1943 | 98 | ... |
| Orono Pulp & Paper, 5s 1941 | 94 | ... |
| Oswego Falls Corp., 6s 1941 | 98 | 100* |
| Oxford Paper, 6s 1947 | 104 | ... |
| Paepcke Paper Mills, 7s 1930 | 99 | None |
| Parsons Pulp & Lumber, 7s 1928 | 97 | ... |
| Parker Young Co., 6½s 1944 | 96½ | 98½ |
| Paterson Parchment Paper, 6s 1938 | 100½ | 102 |
| Penobscot Chemical Fibre, 6s 1942 | 98 | ... |
| Queens City Paper, 7s 1932 | 95 | 100* |
| Richardson Co., 6s 1938 | 100 | ... |
| River Raisin Paper, 6s 1936 | 96 | ... |
| Spanish River Pulp & Paper, 8s 1941 | 108 | 110 |
| Stevens & Thompson Paper, 6s 1942 | 93 | 95 |
| St. Anne Paper, 6½s 1946 | 99 | 101 |
| St. Croix Paper, 5s 1926-37 | 95 | 98* |
| St. Regis Paper Serial, 6½s 1926-35 | 99½ | 101 |
| Tait Paper & Color Industries, 6s 1934 | 90 | 95 |
| Taggart Bros. Co., 6s 1944 | 94 | 97 |
| Ticonderoga Pulp & Paper, 5s 1930 | 94 | 98 |
| Ticonderoga Pulp & Paper, 6s 1940 | 99 | 101 |
| Warren (The S. D.) Company, 6s 1945 | 99 | 101 |
| Wotab Paper, 6½s 1943 | 102 | ... |
| Westfield River Paper, 7s 1926-43 | 90 | ... |
| Whitaker Paper, 7s 1942 | 106 | 108 |

| STOCKS | BID | ASKED |
|---|---|---|
| American Box Board, Pfd. | 8 | 10 |
| American Box Board, Com. | 8 | 10 |
| Am. Tissue Mills, 7% Pfd. | 90 | 100 |
| British Columbia P. & P., Pfd. | 65 | 70 |
| Brompton Pulp & Paper, 8% Pfd. | 93 | 98* |
| Brown Corpn., 7% Pfd. | 97 | 100* |
| Champion Fibre, 7% Pfd. | 105 | ... |
| Diem & Wing, 7% Cum. Pfd. | 90 | ... |
| Donnaconna Paper, Com. | 65 | 70 |
| Donnaconna Paper, Pfd. | 100 | 103 |
| Eastern Mfg. Co., 1st Pfd. | 34 | 37 |
| Great Northern Paper, Com. | 70 | 75 |
| Hammermill Paper, 7% Pfd. | 105 | 110 |
| Hinde & Dauch, Com. | 135 | ... |
| Hinde & Dauch, Pfd. | 100 | ... |
| Holyoke Card & Paper | 150 | None |
| Marathon Paper Mills, Com. | 125 | ... |
| Midwest Box Co., Pfd. 8% | 97 | 99 |
| Midwest Box Co., Pfd. 6% | 90 | 92 |
| Louis De Jonge Co., 7% Pfd. | 93 | 96 |
| Oxford Papers, Com. | 160 | 170 |
| Oxford Paper Co., Pfd. | 175 | ... |
| Penobscot Chemical Fibre, Com. | 65 | 75* |
| Richardson Co., 7% Pfd. | 104 | ... |
| Rubberoid Company | 74 | 77 |
| Seaman Container, Class B (par $1) | 1 | None Off. |
| Seaman Paper Co. | Wanted | None Off. |
| St. Croix Paper | 150 | 170 |
| St. Regis Paper Co., 7% Cum. Pfd. | 101½ | 104½ |
| Westfield River Paper Co., 1st Pfd. | Wanted | None Off. |
| West Virginia Pulp and Paper, Com. | 50 | 55 |
| West Virginia Pulp and Paper, Pfd. | 100 | 103 |
| Whittaker Paper, 7% Cum. Pfd. | 98 | 103 |

* Nominal.

## Paper

(F. o. b. Mill)

| | | |
|---|---|---|
| Ledgers | 11.00 | @38.00 |
| Bonds | 9.00 | @45.00 |
| Writings— | | |
| Extra Superfine | 14.00 | @32.00 |
| Superfine | 14.00 | @32.00 |
| Tub sized | 10.00 | @15.00 |
| Engine Sized | 8.00 | @11.00 |
| News— | | |
| Rolls, contract | 3.25 | @ — |
| Rolls, transient | 3.25 | @ 3.50 |
| Sheets | 3.65 | @ 3.85 |
| Side Runs | 3.00 | @ 3.75 |
| Book, Cased— | | |
| S. & S. C. | 6.35 | @ 7.75 |
| M. F. | 6.25 | @ 7.75 |
| Coated and Enamel | 8.00 | @15.00 |
| Lithograph | 8.00 | @15.00 |
| Tissues—Per Ream— | | |
| White No. 1 | .75 | @ 1.00 |
| Anti-Tarnish | 1.10 | @ 1.90 |
| Colored | 1.00 | @ 2.00 |
| White No. 2 | .75 | @ .85 |
| Kraft | .90 | @ 1.00 |
| Manila | .75 | @ .85 |
| Kraft— | | |
| No. 1 Domestic | 6.25 | @ 6.50 |
| No. 2 Domestic | 5.25 | @ 5.50 |
| Southern | 4.25 | @ 4.50 |
| Imported | 6.50 | @ 7.00 |
| Manila— | | |
| No. 1 Jute | 9.00 | @ 9.25 |
| No. 2 Jute | 7.75 | @ 8.50 |
| No. 1 Wood | 4.75 | @ 5.25 |
| No. 2 Wood | 4.00 | @ 4.50 |
| Butchers | 3.75 | @ 4.25 |
| Fibre Papers— | | |
| No. 1 Fibre | 5.00 | @ 5.50 |
| No. 2 Fibre | 4.75 | @ 5.25 |
| Common Bogus | 2.75 | @ 3.00 |
| Screenings | 3.00 | @ 3.25 |
| Card Middles | 4.00 | @ 5.00 |
| Glassine— | | |
| Bleached, basis 25 lbs. | 13.00 | @16.00 |
| Bleached, basis 20 lbs. | 15.00 | @16.00 |

(Delivered New York)

| | | |
|---|---|---|
| Boards—per ton— | | |
| News | 50.00 | @52.50 |
| Straw | 53.50 | @57.50 |
| Chip | 47.50 | @50.00 |
| Binders' Boards | 70.00 | @75.00 |
| Sgl. Mla. Ll. Chip | 57.50 | @60.00 |
| Wood Pulp | 80.00 | @85.00 |
| Container | 67.50 | @72.50 |

## Mechanical Pulp

(Ex-Dock)

| | | |
|---|---|---|
| No. 1 Imported— | | |
| Moist | 28.00 | @30.00 |
| Dry | 32.00 | @34.00 |

(F. o. b. Mill)

| | | |
|---|---|---|
| No. 1 Domestic | 26.00 | @30.00 |
| Screenings | 15.00 | @20.00 |

## Chemical Pulp

(Ex-Dock, Atlantic Ports)

| | | |
|---|---|---|
| Sulphite (Imported)— | | |
| Bleached | 3.40 | @ 4.50 |
| Easy Bleaching | 2.65 | @ 2.80 |
| No. 1 strong unbleached | 2.40 | @ 2.65 |
| Mitscherlich unbleached | 2.55 | @ 3.25 |
| No. 2 strong unbleached | 2.30 | @ 2.40 |
| No. 1 Kraft | 2.55 | @ 2.75 |
| No. 2 Kraft | 2.40 | @ 2.50 |
| Sulphate— | | |
| Bleached | 3.65 | @ 3.85 |

(F. o. b. Pulp Mill)

| | | |
|---|---|---|
| Sulphite (Domestic)— | | |
| Bleached | 3.20 | @ 4.75 |
| Easy Bleaching Sulphite | 2.60 | @ 2.75 |
| News Sulphite | 2.40 | @ 2.65 |
| Mitscherlich | 3.25 | @ 3.70 |
| Kraft (Domestic) | 2.60 | @ 3.30 |
| Soda Bleached | 3.25 | @ 3.50 |
| Sulphate Screenings— | | |
| Coarse | .75 | @ .85 |
| Refined | 1.50 | @ 1.85 |

## Domestic Rags

### New Rags

(Prices to Mill f. o. b. N. Y.)

| | | |
|---|---|---|
| Shirt Cuttings— | | |
| New White, No. 1 | 11.75 | @12.25 |
| New White, No. 2 | 8.00 | @ 8.50 |
| Silesias No. 1 | 7.25 | @ 7.75 |
| New Unbleached | 10.50 | @11.00 |
| Washables | 4.25 | @ 4.75 |
| Fancy | 5.50 | @ 6.00 |
| Blue Overall | 6.75 | @ 7.25 |
| New Blue Prints | 5.25 | @ 5.50 |
| New Soft Blacks | 5.25 | @ 5.75 |
| Mixed Khaki Cuttings | 4.75 | @ 5.25 |
| Pink Corset Cuttings | 8.00 | @ 8.50 |
| O. D. Khaki Cuttings | 5.25 | @ 5.75 |
| Men's Corduroy | 3.75 | @ 4.25 |
| New Mixed Blacks | 3.50 | @ 3.75 |

### Old Rags

| | | |
|---|---|---|
| White, No. 1— | | |
| Repacked | 5.75 | @ 6.50 |
| Miscellaneous | 4.75 | @ 5.25 |
| White, No. 2— | | |
| Repacked | 3.25 | @ 3.75 |
| Miscellaneous | 2.75 | @ 3.00 |
| St. Soiled, White | 2.25 | @ 2.40 |
| Thirds and Blues— | | |
| Repacked | 2.25 | @ 2.50 |
| Miscellaneous | 1.75 | @ 2.00 |
| Black Stockings | 3.25 | @ 3.75 |
| Roofing Rags— | | |
| Cloth Strippings | 1.70 | @ 1.80 |
| No. 1 | 1.70 | @ 1.80 |
| No. 2 | 1.50 | @ 1.60 |
| No. 3 | 1.30 | @ 1.40 |
| No. 4 | 1.25 | @ 1.35 |
| No. 5A | .95 | @ 1.05 |

## Foreign Rags

| | | |
|---|---|---|
| New Light Silesias | 7.00 | @ 7.50 |
| Light Flannelettes | 7.75 | @ 8.50 |
| Unbleached Cottons | 10.00 | @11.00 |
| New White Cuttings | 10.50 | @11.50 |
| New Light Oxfords | 7.00 | @ 7.50 |
| New Light Prints | 5.50 | @ 6.50 |
| New Mixed Cuttings | 3.00 | @ 3.50 |
| New Dark Cuttings | 2.75 | @ 3.25 |
| No. 1 White Linens | 7.25 | @ 8.00 |
| No. 2 White Linens | 5.50 | @ 6.25 |
| No. 3 White Linens | 4.50 | @ 5.00 |
| No. 4 White Linens | 3.00 | @ 3.50 |
| Old Extra Light Prints | 2.75 | @ 3.25 |
| Ord. Light Prints | 2.25 | @ 2.50 |
| Med. Light Prints | 1.90 | @ 2.10 |
| Dutch Blue Cottons | 2.25 | @ 2.50 |
| German Blue Linens | 2.50 | @ 2.75 |
| German Blue Cottons | 2.00 | @ 2.25 |
| Checks and Blues | 1.75 | @ 2.00 |
| Lindsay Garments | 1.85 | @ 1.95 |
| Dark Cottons | 1.65 | @ 1.70 |
| Shoppery | 1.55 | @ 1.60 |
| French Blues | 2.25 | @ 2.50 |

## Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

| | | |
|---|---|---|
| Gunny No. 1— | | |
| Foreign | 1.60 | @ 1.65 |
| Domestic | 1.70 | @ 1.75 |
| Wool Tares, light | 1.60 | @ 1.65 |
| Wool Tares, heavy | 1.60 | @ 1.65 |
| Bright Bagging | 1.60 | @ 1.65 |
| Small Mixed Rope | 1.30 | @ 1.50 |
| Manila Rope— | | |
| Foreign | 3.25 | @ 3.60 |
| Domestic | 3.75 | @ 4.00 |
| New Burlap Cut | 2.75 | @ 3.00 |
| Hessian Jute Threads— | | |
| Foreign | 3.50 | @ 4.00 |
| Domestic | 3.25 | @ 3.50 |

## Old Waste Papers

(F. o. b. New York)

| | | |
|---|---|---|
| Shavings— | | |
| Hard, White, No. 1 | 3.40 | @ 3.65 |
| Hard, White, No. 2 | 2.90 | @ 3.05 |
| Soft, White, No. 1 | 2.90 | @ 3.10 |
| Flat Stock— | | |
| Stitchless | 1.40 | @ 1.45 |
| Overissue Mag. | 1.40 | @ 1.45 |
| Solid Flat Book | 1.30 | @ 1.35 |
| Crumpled No. 1 | 1.05 | @ 1.10 |
| Solid Book Ledger | 1.90 | @ 2.10 |
| Ledger Stock | 1.70 | @ 1.75 |
| New B. B. Chips | .65 | @ .75 |
| Manilas— | | |
| New Env. Cut | 2.40 | @ 2.60 |
| New Cuttings | 1.60 | @ 1.85 |
| Extra No. 1 old | 1.25 | @ 1.35 |
| Print | .85 | @ .95 |
| Container | .70 | @ .80 |
| Bogus Wrapper | .75 | @ .85 |
| Old Kraft Machine Compressed bales | 2.10 | @ 2.20 |
| News— | | |
| No. 1 White News | 1.75 | @ 1.85 |
| Strictly Overissue | .85 | @ .90 |
| Strictly Folded | .70 | @ .75 |
| No. 1 Mixed Paper | .55 | @ .60 |
| Common paper | .35 | @ .45 |

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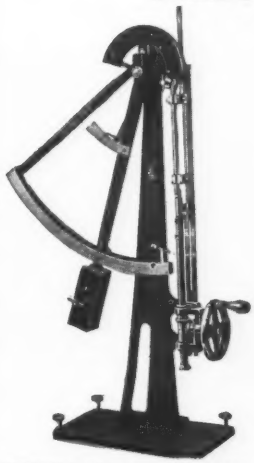

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### Twines

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Cotton— | | | |
| No. 1 | .39 | @ | .40 |
| No. 2 | .37 | @ | .38 |
| No. 3 | .36 | @ | .37 |
| B. C., 18 basis | .38 | @ | .40 |
| A. B. Italian, 18 basis | .48 | @ | .53 |
| Finished Jute— | | | |
| Dark 18 basis | .24 | @ | .25 |
| Light 18 basis | .27 | @ | .28 |
| Jute Wrapping, 3-6 Ply— | | | |
| No. 1 | .21 | @ | .23 |
| No. 2 | .20 | @ | .22 |
| Tube Rope— | | | |
| 4-ply and larger | .18 | @ | .19 |
| Fine Tube Yarn— | | | |
| 5-ply and larger | .23 | @ | .27 |
| 4-ply | .24 | @ | .28 |
| 3-ply | .26 | @ | .30 |
| Unfinished India— | | | |
| Basis | .16 | @ | .17 |
| Paper Makers Twine Balls | .13 | @ | .15 |
| Box Twine, 2-3 ply | .17 | @ | .19 |
| Jute Rope | .21 | @ | .23 |
| Ameri. Hemp, 6 | .29 | @ | .31 |
| Sisal Hay Rope— | | | |
| No. 1 Basis | .18 | @ | .20 |
| No. 2 Basis | .16 | @ | .18 |
| Sisal Lath Yarn— | | | |
| No. 1 | .16 | @ | .18 |
| No. 2 | .14 | @ | .16 |
| Manila Rope | .24 | @ | .26 |

## CHICAGO

| | | | |
|---|---|---|---|
| All Rag Bond | .35 | @ | .41 |
| No. 1 Rag Bond | .25 | @ | .35 |
| No. 2 Rag Bond | .14 | @ | .25 |
| Water Marked Sulphite Bond | .09 | @ | .12 |
| Sulphite Bond | .06¾ | @ | .11 |
| Superfine writing | .18 | @ | .24 |
| No. 1 fine writing | .14 | @ | .18 |
| No. 2 fine writing | .12 | @ | .14 |
| No. 3 fine writing | .08½ | @ | .12 |
| No. 1 M. F. Book | .06½ | @ | .07¼ |
| No. 2 M. F. Book | .05¼ | @ | .06¼ |
| No. 1 S.&S.C. Book | .06¾ | @ | .07¾ |
| No. 2 S.&S.C. Book | .05¾ | @ | .06½ |
| Coated Book | .07½ | @ | .12 |
| Coated Label | .07½ | @ | .10 |
| News—Roll, mill | .03½ | @ | .04¼ |
| News—Sheets, mill | .03¾ | @ | .04¾ |
| No. 1 Manila | .04¼ | @ | .05¾ |
| No. 1 Fibre | .04¾ | @ | .05¼ |
| No. 2 Manila | .04¼ | @ | .04¾ |
| Butcher's Manila | .04 | @ | .04½ |
| No. 1 Kraft | .05¾ | @ | .06¼ |
| Southern Kraft | .04½ | @ | .05 |
| No. 2 Kraft | .05 | @ | .05¼ |
| Wood Tag Boards | .04¼ | @ | .06¼ |
| Sulphite Screenings | .03 | @ | .03¼ |
| Manila Tissue— | | | |
| 24x36 Sheet | .07 | @ | .07¾ |
| White Tissue— | | | |
| 20x30 Sheet | .07¼ | @ | .07½ |
| Boards, per ton— (Delivered Central Territory) | | | |
| Plain Chip | 45.00 | @ | — |
| Solid News | 47.50 | @ | — |
| Manila Lined Chip | 55.00 | @ | — |
| Container Lined— (Delivered Central Territory) | | | |
| 85 Test | 65.00 | @ | 70.00 |
| 100 Test | 70.00 | @ | — |

### Old Papers

(F. o. b. Chicago)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 2.80 | @ | 2.90 |
| White Env. Cuttings | 3.60 | @ | 3.70 |
| No. 1 Soft Shavings | 2.50 | @ | 2.60 |
| No. 1 Mixed | 1.00 | @ | 1.05 |
| No. 2 Mixed | .95 | @ | 1.00 |
| Ledger & Writings | 1.55 | @ | 1.65 |
| Solid Books | 1.20 | @ | 1.30 |
| Blanks | 1.75 | @ | 1.80 |
| Krafts | 1.90 | @ | 2.00 |
| New Kraft Cuts | 2.25 | @ | 2.35 |
| Manila Envelope Cuttings | 2.00 | @ | 2.10 |
| Ex. No. 1 Manila | 1.55 | @ | 1.65 |
| Print Manila | .90 | @ | 1.00 |
| Folded News (oversisue) | .60 | @ | .70 |
| Old Newspapers— | | | |
| No. 1 | .65 | @ | .70 |
| No. 2 | .60 | @ | .65 |
| Mixed Papers— | | | |
| No. 1 | .70 | @ | .80 |
| Roofing Stocks— (F. o. b. Chicago, net cash) | | | |
| No. 1 | 30.00 | @ | — |
| No. 2 | 28.00 | @ | — |

## PHILADELPHIA

### Paper

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bonds | .07 | @ | .40 |
| Ledgers | .11 | @ | .40 |
| Writings— | | | |
| Superfine | .13 | @ | .18 |
| Extra fine | — | @ | .22 |
| Fine | .20 | @ | .26½ |
| Fine, No. 2 | .16 | @ | .25 |
| Fine, No. 3 | .12 | @ | .20 |
| Book, M. F. | .06 | @ | .07 |
| Book, S. S. & C. | .06 | @ | .07½ |
| Book, Coated | .11 | @ | .16 |
| Coated Lithograph | .09 | @ | .12 |
| Label | .09 | @ | .12 |
| News | .03¾ | @ | .04 |
| No. 1 Jute Manila | .08½ | @ | .09 |
| Manila Sul., No. 1 | .04½ | @ | .06 |
| Manila, No. 2 | .04 | @ | .04½ |
| No. 2 Kraft | .05¼ | @ | .05½ |
| No. 1 Kraft | .06 | @ | .06¼ |
| Common Bogus | .02¾ | @ | — |
| Straw Board | 60.00 | @ | 65.00 |
| News Board | 47.50 | @ | 50.00 |
| Chip Board | 42.50 | @ | 45.00 |
| Wood Pulp Board (Carload Lots) | 4.50 | @ | 5.00 |
| Binder Boards— | | | |
| No. 1, per ton | 85.00 | @ | 90.00 |
| No. 2, per ton | 70.00 | @ | 75.00 |
| Carload lots | 60.00 | @ | 65.00 |
| Tarred Felts— | | | |
| Regular | 66.00 | @ | 68.00 |
| Slaters | 70.00 | @ | 72.00 |
| Best Tarred, 1-ply (per roll) | 1.85 | @ | 1.95 |
| Best Tarred, 2-ply (per roll) | 1.55 | @ | 1.70 |
| Best Tarred, 3-ply | 2.10 | @ | 2.15 |
| No. 1 Mixed Paper | .65 | @ | .70 |

### Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White, No. 1 | .11½ | @ | .12 |
| New White, No. 2 | .07 | @ | .07½ |
| Light Silesias | .07 | @ | .07½ |
| Silesias, No. 1 | .07½ | @ | .08 |
| Black Silesia, soft | .05 | @ | .05½ |
| New Unbleached | .10½ | @ | .11 |
| Washable | .04 | @ | .04½ |
| Fancy | .05½ | @ | .06 |
| Cottons—according to grades— | | | |
| Blue Overall | .07½ | @ | .08 |
| New Blue | — | @ | .04 |
| New Black Soft | .05½ | @ | .06 |
| New Light Seconds | .03 | @ | .03½ |
| Khaki Cuttings | .04½ | @ | .05 |
| Corduroy | 03 | @ | .03¾ |
| New Canvas | .08 | @ | .09½ |
| New Black Mixed | .05 | @ | .05½ |

### Bagging

(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Gunny, No. 1— | | | |
| Foreign | 1.75 | @ | 2.00 |
| Domestic | 1.75 | @ | 2.00 |
| Manila Rope | 3.50 | @ | 4.00 |
| Sisal Rope | 1.25 | @ | 2.00 |
| Mixed Rope | 1.10 | @ | 1.25 |
| Scrap Burlaps | 1.50 | @ | 1.75 |
| Wool Tares, heavy | 3.00 | @ | 3.50 |
| Mixed Strings | 1.25 | @ | 1.35 |
| No. 1, New Light Burlap | 2.50 | @ | 2.75 |
| New Burlap Cuttings | — | @ | 2.50 |

### Old Papers

(F. o. b. Phila.)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 3.50 | @ | 3.60 |
| No. 2 Hard White | 3.00 | @ | 3.25 |
| No. 1 Soft White | 2.75 | @ | 3.00 |
| No. 2 Soft White | 1.90 | @ | 2.00 |
| No. 1 Mixed | 1.50 | @ | 1.60 |
| No. 2 Mixed | .90 | @ | 1.00 |
| Solid Ledger Stock | 1.90 | @ | 2.00 |
| Writing Paper | 1.65 | @ | 1.75 |
| No. 1 Books, heavy | 1.25 | @ | 1.30 |
| No. 2 Books, light | .85 | @ | .90 |
| No. 1 New Manila | 2.40 | @ | 2.50 |
| No. 1 Old Manila | 1.50 | @ | 1.60 |
| Print Manila | 1.15 | @ | 1.20 |
| Container Manila | .90 | @ | 1.00 |
| Old Kraft | 2.00 | @ | 2.20 |
| Common Paper | .55 | @ | .60 |
| No. 1 Mixed Paper | .60 | @ | .75 |
| Straw Board, Chip | .65 | @ | .75 |
| Binders Board, Chip | .65 | @ | .75 |
| Overissue News | .75 | @ | .85 |
| Old Newspaper | .60 | @ | .70 |

### Domestic Rags (Old)

| | | | |
|---|---|---|---|
| White, No. 1— | | | |
| Repacked | 4.50 | @ | 5.25 |
| Miscellaneous | 3.50 | @ | 4.00 |
| White, No. 2— | | | |
| Repacked | .02¼ | @ | .02¾ |
| Miscellaneous | .02 | @ | .02¼ |
| Thirds and Blues— | | | |
| Repacked | 2.50 | @ | 2.75 |
| Miscellaneous | 1.60 | @ | 1.75 |
| Black Stockings | 3.50 | @ | 3.75 |
| Roofing Stock— | | | |
| No. 1 | 1.75 | @ | 1.80 |

## BOSTON

### Paper

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ledgers— | | | |
| Sulphite | .07½ | @ | .15 |
| Rag content | .15 | @ | .30 |
| All rag | .38 | @ | .52½ |
| Bonds— | | | |
| Sulphite | .06½ | @ | .11½ |
| Rag content | .15 | @ | .30 |
| All rag | .36½ | @ | .65 |
| Writings | .07 | @ | .20 |
| Superfines | .11 | @ | .31 |
| News | .03½ | @ | .04 |
| Book, Super | .06 | @ | .09 |
| Book, M. F. | .05¾ | @ | .08½ |
| Book, Coated | .08½ | @ | .20 |
| Coated Litho | .09 | @ | .12 |
| Label | .09½ | @ | .15 |
| Jute Manila No. 1 | .11 | @ | .13 |
| Manila, Sul. No. 1 | .04¾ | @ | .06½ |
| Manila, Sul. No. 2 | .03¾ | @ | .04½ |
| No. 1 Kraft | .05½ | @ | .06½ |
| No. 2 Kraft | .04¼ | @ | .05½ |
| Common Bogus | .02¼ | @ | .02¾ |
| Delivered New England points | | | |
| Straw Board, rolls .009 | | | 57.50 |
| Straw Board in Sheets, basis 35s to 70s | 54.50 | @ | 55.00 |
| Filled News Board | | | 47.50 |
| Chip Board | | | 45.00 |
| Single Manila Pulp lined board | 55.00 | @ | 60.00 |
| Single White, patent coated board bender | 75.00 | @ | 82.50 |
| Wood Pulp Board | 80.00 | @ | 85.00 |
| Binder Boards | 70.00 | @ | 75.00 |
| (F. o. b. Mill) | | | |
| Tarred Felts— | | | |
| Regular, carload lots | 65.00 | @ | — |

### Old Papers

(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Shavings— | | | |
| No. 1 Hard White | 2.75 | @ | 3.10 |
| No. 2 Hard White | 2.60 | @ | 2.90 |
| No. 1 Soft White | 2.60 | @ | — |
| No. 1 Mixed | 1.10 | @ | 1.15 |
| No. 2 Mixed | .85 | @ | .90 |
| Solid Ledger Stock | 1.95 | @ | 2.00 |
| No. 1 Books, Heavy | 1.35 | @ | 1.45 |
| No. 1 Books, Light | — | @ | 1.15 |
| Manila Env. Cuttings | 2.00 | @ | 2.25 |
| No. 1 Old Manila | 1.40 | @ | 1.60 |
| White Blank News | 1.75 | @ | — |
| Old Kraft | 2.00 | @ | 2.20 |
| Print Manila | .70 | @ | .80 |
| No. 1 Mixed Paper | .50 | @ | .55 |
| Overissue News | .70 | @ | .80 |
| No. 2 | 1.00 | @ | — |
| No. 3 | — | @ | 1.35 |
| No. 4 | 1.10 | @ | 1.20 |
| No. 5A | .90 | @ | 1.00 |
| B | .80 | @ | .90 |
| C | .80 | @ | .90 |
| Old Newspapers | .65 | @ | — |
| Box Board, Chip | .65 | @ | — |

### Bagging

(Price f. o. b. Boston)

| | | | |
|---|---|---|---|
| Gunny No. 1— | | | |
| Foreign | 1.40 | @ | 1.50 |
| Domestic | 1.50 | @ | 1.60 |
| Manila Rope and Strings— | | | |
| Foreign | — | @ | 3.00 |
| Domestic | — | @ | 3.50 |
| Mixed Strings | .90 | @ | 1.00 |
| Scrap Burlaps | 1.37½ | @ | 1.50 |
| Wool Tares, heavy | — | @ | 1.50 |
| New Burlap Cutting | 2.25 | @ | 2.37½ |

### Domestic Rags (New)

(Price f. o. b. Boston)

| | | | |
|---|---|---|---|
| Shirt Cuttings— | | | |
| New White No. 1 | .11 | @ | .11½ |
| Silesias, No. 1 | .07 | @ | .07½ |
| New Unbleached | .09½ | @ | .10 |
| Fancy | .05 | @ | .05½ |
| Washable | .04 | @ | .04½ |
| Cottons—According to | | | |
| Blue Overalls | .07 | @ | .07½ |
| Blue Overalls | .07½ | @ | — |
| New Black, soft | .04 | @ | .04¼ |
| Khaki Cuttings | .04¾ | @ | .05¼ |
| Corduroy | .03 | @ | .03½ |
| New Canvas | .08 | @ | .08½ |

### Domestic Rags (Old)

(Price f. o. b. Boston)

| | | | |
|---|---|---|---|
| Canvas | .04½ | @ | — |
| White No. 1— | | | |
| Repacked | 5.50 | @ | 5.75 |
| Miscellaneous | 5.00 | @ | — |
| White No. 2— | | | |
| Repacked | .04½ | @ | .05 |
| Miscellaneous | .03½ | @ | .04 |
| Thirds and Blues— | | | |
| Repacked | 2.00 | @ | 2.12½ |
| Miscellaneous | 1.75 | @ | 1.90 |
| Roofing Stock— | | | |
| No. 1 | 1.70 | @ | — |
| No. 2 | 1.50 | @ | — |
| No. 3 | 1.10 | @ | — |
| No. 4 | 1.10 | @ | — |

### Foreign Rags

(F. o. b. Boston)

| | | | |
|---|---|---|---|
| Dark Cottons | — | @ | 1.60 |
| New No. 1 Shirt Cuttings | 11.00 | @ | 11.50 |
| Dutch Blues | 2.00 | @ | — |
| Lace Curtains | 5.00 | @ | 5.25 |
| New Checks & Blues | 4.50 | @ | 4.65 |
| Old Fustians | 1.80 | @ | — |

## TORONTO

### Paper

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Bond— | | | |
| No. 1 Sulphite | .12½ | @ | — |
| No. 2 Sulphite | .10¾ | @ | — |
| No. 1 Colored | .13½ | @ | — |
| No. 2 Colored | .11¼ | @ | — |
| Ledgers (sulphite) | — | @ | — |
| Ledgers, No. 1 | .36 | @ | — |
| Ledgers, No. 2 | .27 | @ | — |
| Writing | .09½ | @ | .10 |
| News f. o. b. Mills— | | | |
| Rolls (carloads) | 3.25 | @ | — |
| Sheets (carloads) | 3.75 | @ | — |
| Sheets (2 tons or over) | 4.00 | @ | — |
| Book— | | | |
| No. 1 M. F. (carloads) | 7.75 | @ | — |
| No. 2 M. F. (carloads) | 7.50 | @ | — |
| No. 3 M. F. (carloads) | 7.25 | @ | — |
| No. 1 S. C. (carloads) | 8.25 | @ | — |
| No. 2 S. C. (carloads) | 8.00 | @ | — |
| No. 3 S. C. (carloads) | 7.75 | @ | — |
| No. 1 Coated and Litho | 14.50 | @ | — |
| No. 2 Coated and Litho | 13.50 | @ | — |
| No. 3 Coated and Litho | 12.75 | @ | — |
| Coated tinted | .15 | @ | — |
| Wrapping— | | | |
| Rag Brown | 4.85 | @ | — |
| White Rag | 5.25 | @ | — |
| "B" Manila | 5.65 | @ | — |
| No. 1 Manila | 6.65 | @ | — |
| Fiber | 6.65 | @ | — |
| Kraft, M. F. | 7.20 | @ | — |
| M. G. | 7.35 | @ | — |

### Pulp

(F. o. b. Mill)

| | | | |
|---|---|---|---|
| Ground wood | 25.00 | @ | 28.00 |
| Sulphite easy bleaching | 58.00 | @ | 61.00 |
| Sulphite news grade | 55.00 | @ | 58.00 |
| Sulphite, bleached | 75.00 | @ | — |
| Sulphate | 65.00 | @ | — |

### Old Waste Paper

(In carload lots, f. o. b. Toronto)

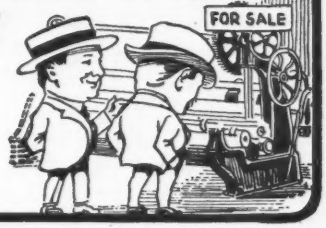
| | | | |
|---|---|---|---|
| Shavings— | | | |
| White Env. Cut | 3.00 | @ | — |
| Soft White Book Shavings | 3.00 | @ | — |
| White Blk, News | 1.50 | @ | — |
| Book and Ledger— | | | |
| Flat Magazine and Book Stock (old) | 1.25 | @ | — |
| Light and Crumpled Book Stock | 1.10 | @ | — |
| Ledgers and Writings | 1.50 | @ | — |
| Solid Ledgers | 1.50 | @ | — |
| Manilas— | | | |
| New Manila Cut | 1.50 | @ | — |
| Printed Manilas | 1.00 | @ | — |
| Kraft | 2.25 | @ | — |
| News and Scrap— | | | |
| Strictly Overissue | .80 | @ | — |
| Strictly Folded | .47½ | @ | .52½ |
| No. 1 Mixed Paper | .60 | @ | — |

### Domestic Rags

(Price to mills, f. o. b. Toronto)

| | | | |
|---|---|---|---|
| No. 1 White Shirt Cuttings | .12 | @ | .12½ |
| Fancy Shirt Cuttings | .06 | @ | .06¼ |

# The CLEARING HOUSE of The Paper Industry




PAPER TRADE JOURNAL
10 East 39th Street New York, N. Y.
Telephone Caledonia 0560

**"SITUATION WANTED" ADVERTISEMENTS**—4c a word, double rates for heavy face type. Minimum charge $1.00. If repeated ½ rate will be charged for each consecutive repetition.

**"HELP WANTED" ADVERTISEMENTS**—4c a word, double rates for heavy face type. Minimum charge $1.00.

**CLASSIFIED ADVERTISEMENTS**—4c a word, double rate for heavy face type. Minimum charge $1.00.

All classified, "Help Wanted" and "Situation Wanted" advertisements are payable in advance.

## HELP WANTED

WANTED—Machine tender to run 100 inch machine making high grade papers. Wages 75 cents per hour, 12 hour day, steady work. State age, experience, and furnish references. Address, Box 27-806, care Paper Trade Journal. J-5

WANTED—First-class boxboard machine tender; preference given to man experienced on straw; very slow running special machine. Good future. Address, Box 27-807, care Paper Trade Journal. D-29

PROMINENT DYESTUFF CONCERN wishes to engage the services of a man with theoretical and practical knowledge of the manufacture and coloring of paper. Sales ability desired as the position offered is that of a salesman as well as demonstrator. Only reliable men who can furnish best references will be considered. State full particulars and salary expected. Please address Box 27-809, care Paper Trade Journal. D-29

MACHINE TENDER WANTED—Running board machine on high grade test liners and box board. State experience with names of mills, also age. Address, Box 27-732, care Paper Trade Journal. J-12

$3,000.00-$30,000.00 men find our Service effective in making connections. Individual. Confidential. Personally planned by JACOB PENN. All mill owners know him, believe in him. Not agency. Jacob Penn, Incorporated, 9 Park Place, New York. tf.

WANTED—Man 30 to 35 years of age as assistant to manager of manufacturing of a large paper converting company in New England. Preference will be given to applicants who have engineering training, experience in paper making or paper converting, and experience in development work. Give full details in first letter and state expected salary. Address, Box 27-825, care Paper Trade Journal. J-5

WANTED—Paper technologist with paper mill experience in making all standard tests on paper and capable of taking full charge of inspection department. Give full particulars of experience, age, reference, and salary required. Please address your reply to Box 27-826, care Paper Trade Journal. J-19

L. HYMAN & SONS, 35 West Houston St., New York, require a city paper and twine salesman. An experienced man will find this an excellent opportunity. D-29

IF YOU are open to overtures for new connection, and qualified for a salary between $2,500 and $25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standing and reputation, through which preliminaries are negotiated confidentially for positions of the calibre indicated. The procedure is individualized to each client's personal requirements; your identity covered and present position protected. Established seventeen years. Send only name and address for details. R. W. Bixby, Inc., 117 Downtown Building, Buffalo, New York. tf.

## HELP WANTED

WANTED—A paper mill engineer. Must be university graduate with at least 5 years of paper and pulp mill experience. State experience, training, age and present salary. Address, Box 27-827, care Paper Trade Journal. J-5

EXPERIENCED AND COMPETENT Rogers Wet Machine operator. Must be familiar with operation of Bird Screens and Improved Thickeners. 8 hour tours. Location Pacific Northwest. Address, Box 27-804, care Paper Trade Journal. J-5

### Pipefitter Foreman Wanted

One who has had experience in sulphite mills, particularly in connection with digesters. Must be first-class. In answer state age, education and past experience.

Paper mill roll grinder also required.

Address, Box 27-796, care Paper Trade Journal. D-29

## SITUATIONS WANTED

SUPERINTENDENT desires to make change. Cylinder or Fourdrinier mill making waxings, crepe, napkins and toilet papers. Address, Box 27-749, care Paper Trade Journal. tf.

MACHINE TENDER wants position. 26 years experience running Fourdrinier machine on most all grades of paper. Married and settled. Will go anywhere. Address, Box 27-770, care Paper Trade Journal. D-29

POSITION WANTED—Mill or production manager. Extensive experience in making many grades of paper, also business and mill management. Now employed; can change on short notice. Can get good results. Address, Box 27-820, care Paper Trade Journal. tf.

CREDIT MANAGER-BOOKKEEPER: Young man, seven years' experience with large paper concern, desires new connection with opportunity for advancement. Address, Box 27-532, care Paper Trade Journal. J-5

SALES AGENT, with office and sales force, would like to get direct representation from a manufacturer of a quality line for the paper mills and book binders. Have a large following in users of beater room equipment and machine knives; territory centering in Philadelphia and covering Eastern Pennsylvania, New Jersey and Delaware. Address, Box 27-772, care Paper Trade Journal. D-29

## SITUATIONS WANTED

BOSS FINISHER and shipping clerk. 32 years high grade mills. Reliable, accurate, producer, executive; genial disposition. Address, Box 27-823, care Paper Trade Journal. J-5

WANTED—In good condition, one or two Hydraulic Pulp Presses with necessary pumps. Give full particulars. Address, Box 27-815, care Paper Trade Journal. J-5

SUPERINTENDENT—Box board or test container. 30 years experience. Southern or Mid-West mill preferred. Good references. Address, Box 27-810, care Paper Trade Journal. J-5

SUPERINTENDENT open for position January 1, 1928. Well up on grease proof, Kraft, toilets, crepes. Good on repairs; get production and quality; 25 years experience. Address, Box 27-811, care Paper Trade Journal. J-5

SUPERINTENDENT or foreman. 18 years experience in making book and specialties, also fine writings. Address, Box 27-812, care Paper Trade Journal. J-5

HIGH GRADE COLOR MAN AND BEATER ENGINEER—One of the best men in the industry. Writings, ledgers, tissues and specialties, rag and wood. German, age 40. A thorough paper maker, available at once. Address, Box 27-788, care Paper Trade Journal. D-29

SECRETARY — STENOGRAPHER: Capable woman, thirteen years experience paper business. Assistant to mill representatives. Wants responsible position. Write for personal interview. Address, Box 27-828, care Paper Trade Journal. J-12

ASSISTANT SUPERINTENDENT — College graduate, chemist, nine years practical experience and research in rag fine writing papermaking and specialties, desires position with opportunity for advancement. Address, Box 27-320, care Paper Trade Journal. tf.

PULP AND PAPER MILL ENGINEER—Mills contemplating alterations and extensions can have plans made up and work supervised by competent engineer with many years experience. References furnished. Address, Box 27-776, care Paper Trade Journal. D-29

### Salesman—Executive

To develop and handle sales for Tissue Mill. Must be a constructive result getter. Will have chance to invest substantially in business if successful.

An unusual opportunity for the right man.

Address, Box 27-764, care Paper Trade Journal. D-29

# SHARTLE BROTHERS

DIVISION OF THE BLACK-CLAWSON COMPANY

## Announce

*the Purchase of*

## The GRILEY-UNKLE ENGINEERING CO.

**of Fort Wayne, Indiana**

*Manufacturers of*

## Continuous BEATING MACHINES

***and their appointment as Exclusive Agents for***

## The Hardinge Rod Mill — *for the pulp and paper industry*

**All business of the Griley-Unkle Engineering Company is now handled through the offices of the Shartle Brothers Machine Company, Middletown, Ohio**

Continous [GRILEY-UNKLE] Beating Machines

## SITUATIONS WANTED

**NORWEGIAN AND SWEDISH PAPER AND PULP MAN** with 23 years experience in the paper trade wants to act as buying agent. Th. Solberg, Skovveien 29, Oslo, Norway. D-29

**EXECUTIVE POSITION WANTED**—A splendid business experience and training, with an economical operating cost record; supplemented with a thorough paper making experience. Address, Box 27-829, care Paper Trade Journal. J-26

**BOARD MILL MANAGER**—A high grade executive and organizer, as well as a thorough paper maker. Many years with largest manufacturer in America. State salary. Address, Box 27-789, care Paper Trade Journal. D-29

**SUPERINTENDENT**—Experienced in all grades of box board, container, liner, test stock, etc. Can produce quality and production. A-1 on repairs and handle help successfully. Will go anywhere. Best of references. Address, Box 27-705, care Paper Trade Journal. D-29

**SALES MANAGER** for concern manufacturing beater room equipment and machine knives desires to make a change. Thoroughly experienced salesman and manager and can produce business. Would like to connect with manufacturer who desires increased business and who can handle large accounts. Address, Box 27-773, care Paper Trade Journal. D-29

**MILL CONNECTION WANTED**—Capable experienced salesman desires mill connection. Years of experience in the sales of both coarse and fine paper. Willing to travel. Highest credentials as to ability and integrity. Address, Box 27-490, care Paper Trade Journal. tf.

**WANTED**—A position as tour boss or machine tender. Up on all kinds of box or test boards. Can give good references. Address, Box 27-769, care Paper Trade Journal. tf.

**WANTED**—Position as boss beaterman or beater engineer. Accustomed to all grades. Good on colors. Married. Earl Davis, 513 W. Willard St., Kalamazoo, Mich. D-29

**SUPERINTENDENT**—Trained in the manufacture of tissues, all grades, plain and creped; high grade Kraft papers, converting specialties, crepes, waxing, crepe towels, and Kraft, waxed Kraft. Address, Box 27-563, care Paper Trade Journal. J-5

## WANTED

**WANTED**—2 W. & P. Pulpers, 2 Filter Presses and 1 Rogers Wet Machine. Address, Box 27-285, care Paper Trade Journal. tf.

**WANTED**—Rewinder to handle sheet not less than 50" or more than 72" wide. Address, Box 27-671, care Paper Trade Journal. tf.

**HAMBLET SHEET CUTTER**, 46"-50" with stand. Mid-States Gummed Paper Co., 2433 So. Robey St., Chicago, Ill. J-5

**WANTED**—Bird Rotary Screen, Cylinder Machine, and Blow Tanks. Address, Box 27-818, care Paper Trade Journal. J-5

**CAMERON SLITTER WANTED**—From 40" to 60" in width. Address, Box 27-830, care Paper Trade Journal. J-5

**WANTED TO BUY**—Small Rewinder, small Cutter, large Dryer. Address, Box 27-814, care Paper Trade Journal. D-29

WE ARE INTERESTED IN THE

**Purchase of Binders Board Mill**

Give full particulars as to equipment, location and tonnage capacity, with price and terms desired.

Address, Box 27-831, care Paper Trade Journal. D-29

## WANTED

**WANTED**—Pasting machine to accommodate paper machine trimming 120 inches. Also gumming machine for kraft tape. Also spiral core winding machine; and paper corrugating machine. Give full information and price on machinery submitted for sale, when answering ad. Address, Box 27-832, care Paper Trade Journal. J-12

## MISCELLANEOUS

**SEND YOUR ODD LOT LIST** of coarse and fine papers together with samples to Goldman Paper & Paper Stock Co., 414 So. Front Street, Philadelphia, Pa. tf.

**WANTED—Mill ends and job lots in rolls or flats in any quantity, all grades. Also boards.** Joseph Goldstein & Sons, 1302-9 N. Halsted Street, Chicago, Illinois. tf.

**CLARK MANUFACTURING COMPANY.** Holyoke, Mass. Telephone 1828. Builders of cylinder moulds, couch and felt rolls, dandy rolls. We cover dandies and cylinders tight, for fast running machines. 3-5-27

**WANTED**—Side or odd lot rolls ten to ninety pound basis. The larger the quantity the better we like it. Address, Box 27-481, care Paper Trade Journal. tf.

**SALES MANAGER** or salesman. Mill desiring efficient and dignified representation by man, 45, having had over twenty years mill and selling experience to jobbers and converters in Eastern Atlantic and Southern states. No objection to location or travel; prefer coarse paper mill. Address, Box 27-813, care Paper Trade Journal. J-5

**ACCOUNTANT AND TAX CONSULTANT.** twenty years of thorough experience in the PAPER and ALLIED trades, rendering PERSONAL SERVICE, and at present serving a large number of concerns in the trade throughout several states, is open for part time engagements. My type of service has been of considerable aid to the paper merchant in the conduct and the progress of his business. Unquestionable references furnished. Address, Box 27-765, care Paper Trade Journal. J-12

**WANTED TO PURCHASE**—Job and odd lots, any size sheets or rolls, parchment, glassine, waxed, grease proof paper; card board, pulp board, wrapping paper. Address, Box 27-833, care Paper Trade Journal. tf.

## BUSINESS OPPORTUNITIES

**PAPER COMPANY DESIROUS OF EXPANSION** can obtain one-half to full interest in going profitable Eastern mill, containing three Fourdrinier machines with total trim of 280 inches. Labor, fuel and freight rates good. Mill adaptable for bleached or unbleached papers or specialties. Proposition will stand closest investigation. Address, Box 27-802, care Paper Trade Journal. D-29

## FOR SALE

**FOR SALE**—Spangenberg Screen, only slightly used. Address, Box 27-792, care Paper Trade Journal. D-29

**FOR SALE**—One 74 inch Seybold 20th Century Automatic Clamp Paper Cutter. One 72 inch double automatic collapsing reel, complete. One small Moore and White Speed Change, complete with stands. All in good condition. Address, Box 27-798, care Paper Trade Journal. D-29

**FOR SALE PULP EQUIPMENT**

2—600 ton Southwark Foundry pulp presses, hydraulic pressure with pumps. Built in 1924.
2—Green Bay Barkers.
1—Appleton 84" wet machine used 1½ years.
1—Valley Iron Works 84" wet machine.
3—72" wet machines.
Attractive prices for quick sale and cash. Address, Box 27-817, care Paper Trade Journal. tf.

## HELP WANTED

**MILL MANAGER WANTED**—Technically educated paper manufacturer for successful mill; preference given to man between 35 and 50 with practical experience in manufacturing, and able to take full charge of office end as well as mill. Charles P. Raymond Service, 294 Washington St., Boston, Mass. Confidential Employment Service for employers and employees. D-29

## FOR SALE

**FOR SALE**—2 Dilts iron tub Beating Engines, second hand but very desirable. Dilts Machine Works, Inc., Fulton, N. V. D-29

**GRISSINGER** Automatic Core Machine makes toilet paper cores from sheets. Practically new, operated about two weeks. Make best offer. Address, Box 27-816, care Paper Trade Journal. J-12

**FOR SALE**

2—7 x 16 Shartle Triplex Pumps, in good condition.

Address, Box 27-753, care Paper Trade Journal. tf.

**FOR SALE**

One 130" stack machine calenders, ten rolls.
One 134" Pusey & Jones uniform speed reel.
One 130" Moore & White four drum winder.
One 129" Hamblet duplex cutter with layboy and roll stands.
ALL EQUIPMENT IN EXCELLENT CONDITION.

**Frank H. Davis Company,**
175 Richdale Avenue,
Cambridge, Mass.

**FOR SALE**

1—84" Black-Clawson single Cutter.
1—140" Dillon duplex with Moore & White Layboy.
1—72" Hamblet Single Cutter with 24 roll back stand.
1—84" Beloit heavy duty duplex.
1—52" Moore & White Cutter with Moore & White Layboy and Backstands.
1—48" Moore & White Cutter with Moore & White Layboy and Backstands.
1—42" Moore & White Cutter with Moore & White Layboy and Backstands.
1—82" Heavy duty Hamblet Single Cutter with 24 roll Backstands.
2—58" Moore & White Single Cutters.
4—54" Moore & White Single Cutters.
6—48" Moore & White Single Cutters.
1—57" Hamblet Duplex Cutter, Heavy Duty.

**The Shartle Brothers Machine Co.,**
Middletown, Ohio tf.

## HELP WANTED

WANTED—Assistant for manufacturing department of large paper company in New York with thorough knowledge of modern cost accounting and familiar with general industrial engineering problems. Man with actual paper mill experience preferred. Age around 30. In applying for position give schooling, details of previous experience, references and salary expected. Good future for right man. Address, Box 27-834, care Paper Trade Journal. D-29

## SITUATIONS WANTED

FINE PAPERMAN, 31 years, desires position as salesman with reliable house. First rate references. Address, Box 27-837, care Paper Trade Journal. D-29

WANTED—Position as head millwright. Twenty years experience, Fourdrinier or Cylinder machines; can cover cylinders, make coucher rolls. Married man. Best of references. Now employed. Address, "M. M. M.," 309 Fulton St., East DePere, Wisconsin. J-5

MILL REPRESENTATION sought by young man covering New York and New England states, on commission basis, to sell paper box board, set-up, folding and jute liner grades, along with board product of specialty mill. Address, Box 27-838, care Paper Trade Journal. J-19

## WANTED

WANTED TO BUY—Schopper Bending Tester and one Tear Tester. Address, Box 27-835, care Paper Trade Journal. D-29

**Address Replies**

to advertisements appearing under Box Numbers in care of

PAPER TRADE JOURNAL
10 East 39th St.,
New York, N. Y.

## BUSINESS OPPORTUNITIES

### WILL HELP FINANCE PAPER SALESMAN

who wants to start in business for himself in Chicago. Must have established clientele and some money. Replies will be treated very confidential.

Address, Box 27-836, care Paper Trade Journal. J-5

## FOR SALE

1—64" super-calender about three years old. Equipped with Cutler-Hammer clutch.

**Address, Box 27-742, care Paper Trade Journal.**

## FOR SALE

### 50 TON SULPHITE MILL

consisting of

3-14 x 42 ft. Digesters, Jenssen Acid System, Glens Falls Burners, Rotary and Flat Screens, Tanks, Pumps and all equipment for complete plant. Digesters can be shipped by water without dismantling.

Address Box 27-803, care Paper Trade Journal

### NEW 500 H. P. STIRLING BOILER

160 lb. pressure, N. Y. State, with stoker, soot blower, all piping.

### NEW IMPROVED KNOTTER

1—Improved Knotter Screen, brand new.

**TECHNICAL ECONOMIST CORPORATION**

40 Rector Street New York City

### NEW FIRE PUMP

1—750 Gallon Fairbanks-Morse, 3 Nozzle Underwriters Pump, $750.00 f.o.b. cars.

NEW DECKER
Improved Machinery make.

**TECHNICAL ECONOMIST CORPORATION**

40 Rector Street New York City

### NEW ROTARY INCINERATOR

1—9 Ft. Diameter by 30 Ft.

NEW BIGGS BLEACHER
1—6 x 20 Ft. Rotary Complete with Drives.

NEW ROTARY KILNS
1—6 x 60 Foot Vulcan.
2—8 x 125 Foot Vulcan.

**TECHNICAL ECONOMIST CORPORATION**

40 Rector Street New York City

## HEADQUARTERS

**For Good Used Machinery**

ROTARY DRYERS AND KILNS
6—4' x 30' American Process.
2—6' x 60'.
1—6' x 100'.
1—8' x 125'.

PULPER MIXERS
1—W. & P. size 17-200 gals.
Also several smaller sizes.

TUBE AND ROD MILLS
1—3' 6" x 12' Allis Chalmers.
1—4' x 16' Schmidt.
6—5' x 22' Allis Chalmers.
7—5' 6" x 22' Schmidt.
1—6' x 22' Gates.

SULPHUR BURNERS
1—3' x 8' Glens Falls.
4—4' x 16' Glens Falls.
4—4' x 20' Glens Falls.

EVAPORATORS
1—Stokes Triple Effect, 1,000 sq. ft.
1—Scott Triple Effect, 1,350 sq. ft.
1—Swenson Triple Effect, 1,750 sq. ft.
2—Swenson Triple Effect, 3,300 sq. ft.

ROTARY FILTERS
3—6' x 4' Oliver.
2—6' x 6' Oliver.
2—6' x 6' Oliver, Acid Proof.
1—8' x 8' Oliver, Acid Proof.

SEND US YOUR INQUIRIES
WE BUY YOUR IDLE EQUIPMENT

**CONSOLIDATED PRODUCTS COMPANY, INC.**

15 PARK ROW NEW YORK, N. Y.
Barclay 0603

## FOR SALE

1—Heavy duty Beloit 114" Paster.

4—Jones Washers. Iron tubs. Rolls 67 x 60. Good shape.

1—Breaker Roll 64" diameter by 54" face.

1—72" Model 10 Cameron.

60" trim Black-Clawson Fourdrinier machine.

Several White cedar stuff chests, A-1 shape.

1—48"—3 cylinder machine.

1—70"—2 cylinder machine.

Several Chippers.

Four deck Beloit frames. These are modern and extra heavy.

One Ryther & Pringle Multiple Saw Slasher. Will cut 32'.

One Farrel Roll Grinder.

One No. 2 Lannoye Pulper.

One 61" Holyoke Super-Calender.

**The Shartle Brothers Machine Company**

Middletown, Ohio tf.

## CHOCOLATE GLASSINE

**basis 25 lb.**

21 cases 25½ x 38 @ 7½c lb.
14 cases 24 x 36 @ 8 c lb.

Case lots only.

**E. W. TWITCHELL, Inc.**

Drexel Bldg.,
Philadelphia, Pa. D-29

**Classified Advertising Brings Results**

ROSS SYSTEMS
HEATING—VENTILATING—DRYING
J. O. ROSS ENGINEERING CORPORATION
208 W. Washington St., CHICAGO
30 East 42nd St., NEW YORK
1117 Tacoma Ave., TACOMA, WASH.

JAMES W. SEWALL
Consulting Forester
OLD TOWN MAINE

Dayton High Speed Beaters
—Advantages—
Heavier Furnishes
Faster Beating
Greater Output
More Uniform Product
Saving in Power
Saving in Labor
Eastern Representatives: E. K. Mansfield & Co. 501 5th Ave., New York
The Dayton Beater & Hoist Co., Dayton, O.

JAMES L. CAREY
Paper Mill Architect and Engineer
208 North Laramie Avenue, Chicago
Cable Address: JASCAR, Chicago
Codes: ABC 5th Western Union

USED BY MILLS MAKING OVER 80% OF THE COUNTRY'S PAPER
VACUUM PUMPS
Nash Hytor
AIR COMPRESSORS
NASH ENGINEERING CO. SOUTH NORWALK, CONN.

D. MANSON SUTHERLAND, Jr.
Consulting Chemical Engineer
Broad Street Bank Building, Trenton, N. J.
341 Madison Ave., New York
SPECIAL FIBRE PRODUCTS AND PROCESSES
HOMOGENEOUS BOARDS, PURIFICATION
WATERPROOFING COMPOSITIONS
FORMING AND DRYING MACHINES
UTILIZATION OF WASTE FIBRES
OF EFFLUENTS

JOHN A. STEVENS
CONSULTING POWER ENGINEER
16 Shattuck Street
LOWELL MASSACHUSETTS

FREDERICK L. SMITH
21 EAST 40TH STREET, NEW YORK
PULP AND PAPER MILL ENGINEER

A. J. BRADLEY MFG. COMPANY
Oiled Stencil Board
Lamp Shade Parchment
IN A VARIETY OF GRADES AND COLORS
101 BEEKMAN STREET NEW YORK

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Examinations, Appraisals, Surveys
C. R. BERRY
Forestry and Power Engineering
"A Complete Service to the Wood Room"
607 Lumber Exchange SEATTLE, WASH.

Stebbins Engineering & Mfg. Co.
Chemical Pulp Mill Engineers
WATERTOWN, N. Y.
Digester, Acid Proof and other Guaranteed Linings
Bleaching Systems

KARL A. LEFREN
CONSULTING ENGINEER
171 Madison Ave., New York City

INTERNATIONAL PULP CO.
NEW YORK CITY
ASBESTINE PULP
857. U. S. PATENT OFFICE
FILLER
90% Retention

C. C. HOCKLEY
Consulting Engineer
Industrial Reports
Paper & Pulp Mills
Power Plants
Appraisals
Spalding Building
PORTLAND, OREGON

COMBUSTION ENGINEERING CORPORATION
PULVERIZED FUEL
International Combustion Building, 200 Madison Ave., (35th to 36th Sts.) New York

Pulp and Paper Mills, Power Plants, Chemical Plants

Engineering Design
Construction Supervision
Mechanical Equipment
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Investigations

Management
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Waste Utilization
Fuel Economy
Valuations

**Arthur D. Little, Inc.**

*Chemists : Engineers : Managers*

30 CHARLES RIVER ROAD CAMBRIDGE, MASS.

**GEORGE F. HARDY**

M. AM. SOC. C. E. M. AM. SOC. M. E.
M. ENG. INST. CAN.

***Mill Architect and Consulting Engineer***

Langdon Building, 309 Broadway
New York

SPECIALTY

Paper, Pulp and Fibre Mills
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Cable Address:
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**HARDY S. FERGUSON**

**CONSULTING ENGINEER**

200 Fifth Avenue New York City

MEMBER AM. SOC. C. E.

MEMBER AM. SOC. M. E.

MEMBER ENG. INST. CAN.

PAPER, PULP AND FIBRE MILLS INCLUDING BUILDINGS AND COMPLETE MECHANICAL EQUIPMENT
WATER POWER DEVELOPMENT DAMS, STORAGE RESERVOIRS and OTHER HYDRAULIC STRUCTURES
STEAM PLANTS

EXAMINATION
REPORTS
ESTIMATES OF COST
DESIGNS
SPECIFICATIONS
VALUATIONS

**H. S. TAYLOR**

**Consulting Engineer**

Member Am. Soc. C. E.—Member Am. Soc. M. E.
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PULP, PAPER, AND FIBRE MILLS
HYDRO-ELECTRIC AND STEAM POWER PLANTS
PLANS-SPECIFICATIONS-EVALUATIONS
REPORTS - CONSULTATIONS

Jefferson St. Arcade Dayton, O.
Guarantee Bldg. Montreal, P. Q.


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Ruths Accumulator Co., Inc.
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Ruths Accumulator Co., Inc.
**AGALITE**
Union Talc Co.
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Allen-Sherman Hoff Co.
**ASH QUENCHERS**
Allen-Sherman Hoff Co.
**ASH REMOVING SYSTEMS**
Allen-Sherman Hoff Co.
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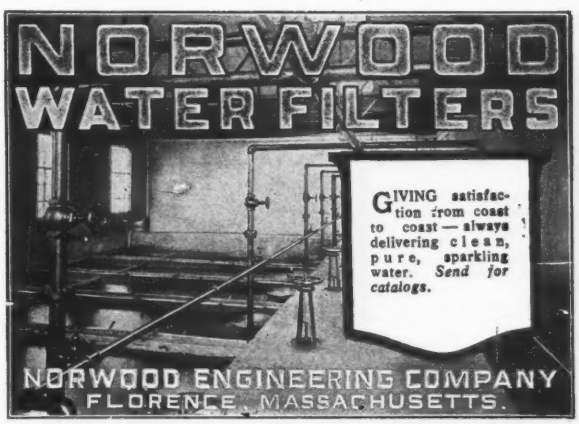
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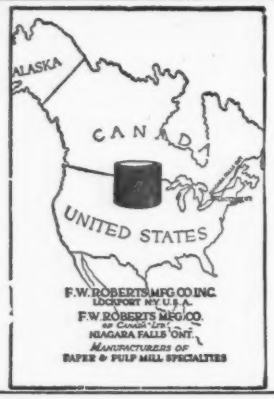


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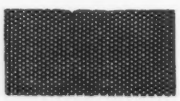
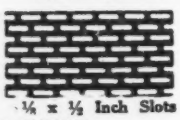


.065 Inch Round



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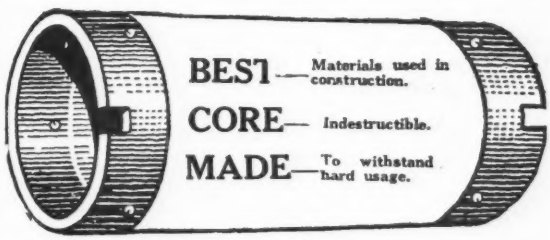


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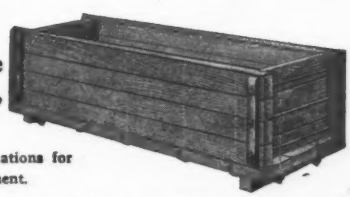

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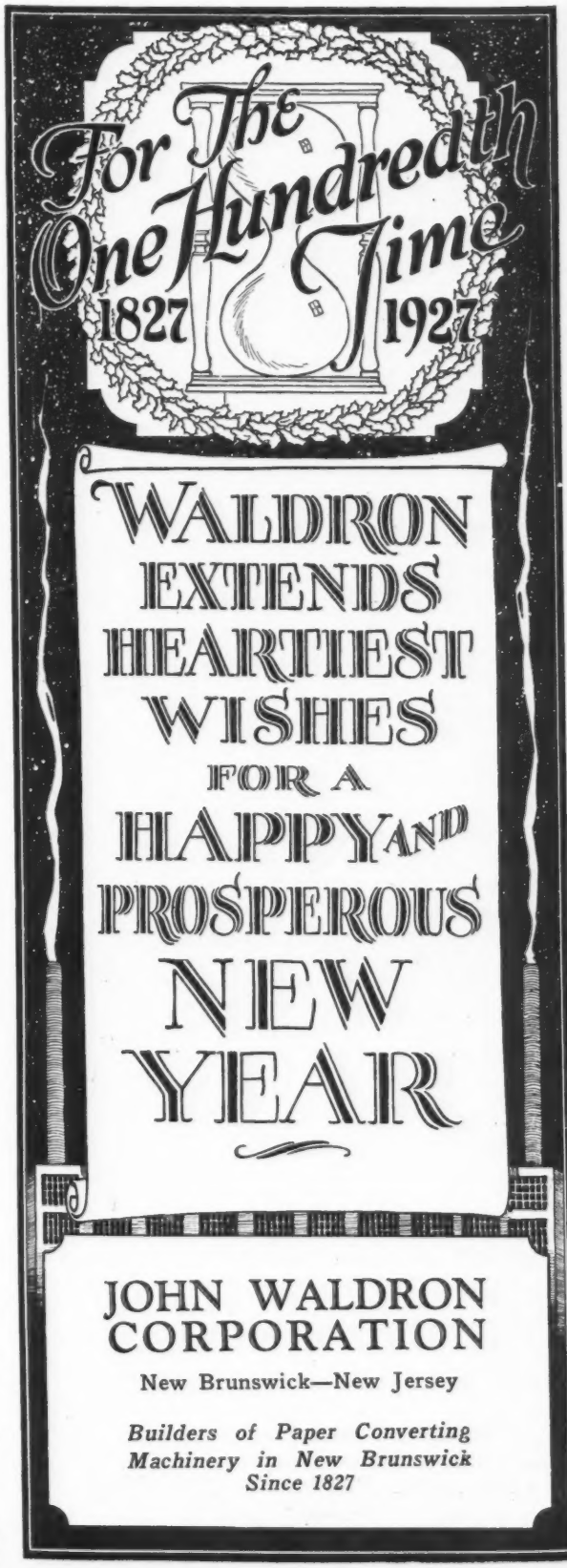
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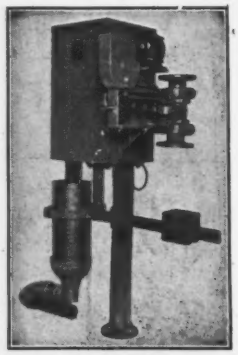

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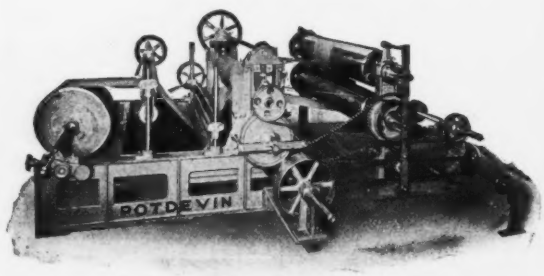


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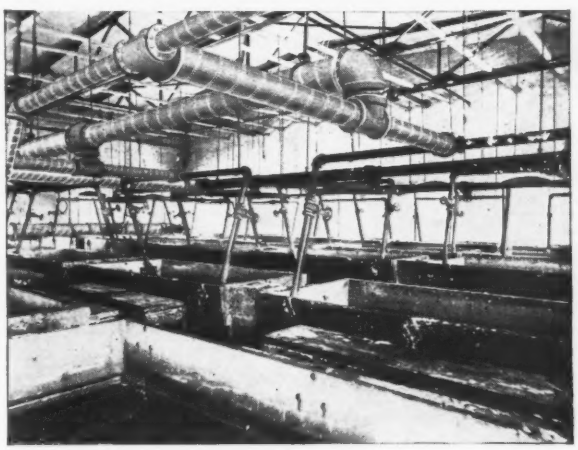

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